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(FILE 'HOME' ENTERED AT 12:50:58 ON 25 JUL 1999)  
SET COST OFF  
SET AUHELP OFF

FILE 'HCAPLUS' ENTERED AT 12:51:06 ON 25 JUL 1999

L1            E SAPSE A/AU  
51 S E4-E6  
          E STEROIDOGENESIS/PA,CS  
L2            2 S E3-E7  
L3            51 S L1,L2  
L4            2273 S AZT OR ZIDUVUDINE  
L5            1578 S DDC OR ZALCITABINE  
L6            108 S NELFINAVIR  
L7            1 S DELVIRDIN#  
L8            0 S ABACARVIR#  
          E ABACA  
L9            24 S E13  
          E DELVIR  
L10          24 S EFAVIRENZ  
L11          49 S ADEFOVIR?  
L12          0 S BBH()10652  
L13          0 S BBH()10 652  
L14          0 S BBH10652  
L15          253 S FTC  
L16          283 S TBD  
L17          0 S L15 AND L16  
L18          1 S L16 AND 63/SC,SX  
L19          0 S NKC482 OR NKC 482  
L20          0 S NCK482 OR NCK 482  
L21          83 S PMPA  
L22          0 S POC PMPA  
L23          11 S POC PMPA

FILE 'BIOSIS' ENTERED AT 13:02:24 ON 25 JUL 1999  
L24          0 S BBH10652 OR BBH()(10652 OR 10 652)

FILE 'EMBASE' ENTERED AT 13:02:39 ON 25 JUL 1999  
L25          0 S BBH10652 OR BBH()(10652 OR 10 652)

FILE 'AIDSLINE' ENTERED AT 13:02:48 ON 25 JUL 1999  
L26          0 S BBH10652 OR BBH()(10652 OR 10 652)  
L27          2 S 10652

FILE 'HCAPLUS' ENTERED AT 13:03:23 ON 25 JUL 1999  
L28          0 S BCH10652 OR BCH()(10652 OR 10 652)

FILE 'AIDSLINE' ENTERED AT 13:04:07 ON 25 JUL 1999  
L29          0 S NCK482 OR NKC482 OR (NCK OR NKC)()482  
L30          4 S TBD

FILE 'REGISTRY' ENTERED AT 13:06:08 ON 25 JUL 1999  
L31          13 S 30516-87-1 OR 7481-89-2 OR 69655-05-6 OR 3056-17-5 OR 134678-  
          E BCH/CN  
L32          1 S 143491-54-7  
L33          2 S 143491-54-7/CRN  
L34          1 S 66264-45-7  
          E C38H66N2O2/MF

L35 10 S E3  
 L36 4 S L35 AND 46.150.18/RID AND 2/NR  
 L37 2 S L36 NOT CYCLOHEXYL  
 L38 1 S L37 NOT 107004-47-7  
 L39 1 S L33 AND CLH  
     E NKC/CN  
     E NCK/CN  
     E PMPA/CN  
 L40 1 S 147127-20-6  
     E C 9H14N5O4P/MF  
     E C9H14N5O4P/MF  
 L41 14 S E3 AND NCNC2-NCNC3/ES  
 L42 4 S L41 AND METHYLETHOXY METHYL  
 L43 3 S L42 AND 6 AMINO  
 L44 1 S 201341-05-1  
     E C10N30N5O10P/MF  
     E C19N30N5O10P/MF  
     E C19H30N5O10P/MF  
 L45 1 S E3  
 L46 21 S L31, L32, L34, L38, L39, L40, L43, L45

FILE 'HCAPLUS' ENTERED AT 13:16:00 ON 25 JUL 1999  
 L47 4563 S L46  
 L48 4334 S L4-L7, L9-L11, L15, L16, L21, L23  
 L49 4703 S PROCAINE  
 L50 40708 S ASCORBIC ACID  
 L51 4 S ZINC HEPTAHYDRATE  
 L52 2 S ZN HEPTAHYDRATE  
 L53 13958 S PHOSPHATIDYL SERINE  
 L54 246 S PHOSPHATIDYL SERINE (L) THU/RL  
 L55 4 S L54 AND HIV  
 L56 416 S HMB  
 L57 3 S L56 AND HIV  
 L58 3 S L56 AND IMMUNODEFICIEN?  
 L59 0 S L56 AND AIDS  
 L60 1722 S DHEA  
 L61 2175 S KETOCONAZOLE  
 L62 5074 S PREGNENOLONE  
 L63 4714 S PHENYTOIN  
 L64 8640 S CLONIDINE  
 L65 184 S IPRIFLAVONE  
 L66 1160 S RU 486

FILE 'AIDSLINE' ENTERED AT 13:25:30 ON 25 JUL 1999  
 L67 10 S HMB

FILE 'REGISTRY' ENTERED AT 13:25:55 ON 25 JUL 1999  
 L68 1 S 625-08-1

FILE 'REGISTRY' ENTERED AT 13:26:34 ON 25 JUL 1999  
 L69 1 S 7440-66-6  
 L70 550 S 7440-66-6/CRN AND H2O  
 L71 524 S L70 AND 2/NC  
 L72 7 S L71 AND HEPTAHYDRATE  
     E ZINC HEPTAHYDRATE/CN  
     E ZN.7/MF  
     E 7 H2O/MF  
 L73 543 S L70 NOT L72  
 L74 190 S L73 NOT (P OR N OR S OR SI OR MN OR CL OR B OR I OR F)/ELS

L75 130 S L74 NOT C/ELS  
 L76 0 S L75 AND 3/ELC.SUB  
 L77 34 S L75 AND 3/ELC  
 L78 17 S L70 AND HEPTA?  
 L79 10 S L78 NOT L72,L77  
 L80 12 S 51-05-8 OR 50-81-7 OR L69 OR 73-78-9 OR 625-08-1 OR 53-43-0 O  
 L81 2 S L80 AND CLH  
 L82 2 S 137-58-6 OR 59-46-1  
     E PHOSPHATIDYL SERINE/CN  
     E ?PHOSPHATIDYL SERIN? NOT UNSPECIFIED  
 L83 38 S ?PHOSPHATIDYL SERIN?/CNS NOT UNSPECIFIED  
 L84 22 S L83 NOT SQL/FA  
 L85 36 S L80,L82,L84

FILE 'HCAPLUS' ENTERED AT 13:38:36 ON 25 JUL 1999

L86 246490 S L85  
 L87 516565 S PROCAINE OR ASCORBIC ACID OR VITAMIN C OR ZINC OR ZN OR LIDOC  
 L88 27296 S DHEA OR DEHYDROPIANDROSTERONE OR PRASTERONE OR KETOCONAZOLE  
 L89 213 S L86-L88 AND L48  
 L90 34 S L89 AND HIV  
 L91 18 S L89 AND AIDS  
 L92 36 S L89 AND (ACQUIR? OR HUMAN) () IMMUNODEFICIEN?

FILE 'REGISTRY' ENTERED AT 13:42:20 ON 25 JUL 1999

L93 2 S 9068-38-6 OR 144114-21-6

FILE 'REGISTRY' ENTERED AT 13:42:28 ON 25 JUL 1999

FILE 'HCAPLUS' ENTERED AT 13:42:42 ON 25 JUL 1999  
 L94 6386 S L93  
 L95 14657 S REVERSE TRANSCRIPTASE OR REVTAASE OR RETROPEPSIN  
 L96 11 S L89 AND L94,L95  
 L97 47 S L90-L92,L96  
 L98 588 S (ZN OR ZINC) (10A) (HEPTAHYDRATE OR 7H2O)  
 L99 7 S (ZN OR ZINC) () (HEPTAHYDRATE OR 7H2O)  
     SEL RN

FILE 'REGISTRY' ENTERED AT 13:45:04 ON 25 JUL 1999

L100 20 S E1-E20  
 L101 4 S L100 AND ZN/ELS  
     E H7O7ZN/MF

FILE 'HCAPLUS' ENTERED AT 13:46:38 ON 25 JUL 1999

L102 7 S L97 AND COMPOSITION  
 L103 9 S L89 AND (ACQUIR? OR HUMAN) (L) IMMUN# (L) DEFICIEN?  
 L104 47 S L97,L103  
 L105 7 S L104 AND COMPOSITION  
 L106 5 S L105 NOT ZINC FINGER  
 L107 16 S L104 AND COMBIN?  
 L108 14 S L107 NOT ZINC FINGER  
 L109 5 S L104 AND SYNERG?  
 L110 3 S L109 NOT ZINC FINGER  
 L111 2 S L104 AND FORMUL?  
 L112 2 S L111 NOT ZINC FINGER  
 L113 18 S L106,L108,L110,L112  
 L114 2 S L105,L107,L109 NOT L113  
 L115 3 S L89 AND MARROW  
 L116 1 S L89 AND ?NAUSE?  
 L117 0 S L89 AND (EMETIC OR ANTIEMETIC)

L118 1 S L89 AND ?MYALG?  
L119 0 S L89 AND (SLEEP OR INSOMN?)  
L120 0 S L89 AND CUSHING#  
L121 3 S L89 AND ?ANEMI?  
L122 0 S L89 AND TRIGLYCER?  
L123 3 S L89 AND ?CHOLESTEROL?  
L124 3 S L89 AND INSULIN  
L125 0 S L89 AND BUFFALO  
L126 14 S L89 AND PROTEASE  
L127 5 S L126 AND L94,L95  
L128 12 S L126 AND L104  
L129 18 S L115,L116,L118,L121,L123,L124,L127  
L130 30 S L113,L129  
L131 5 S L126,L128 NOT L130  
L132 3 S L131 NOT (METALLOPROTEASE OR AMPRENAVIR)/TI  
L133 3 S L132 AND L48  
L134 33 S L130,L133  
L135 0 S L3 AND L48  
L136 5 S L3 AND L86-L88

FILE 'REGISTRY' ENTERED AT 13:59:10 ON 25 JUL 1999

L137 1 S 51-05-8  
L138 1 S 59-46-1  
L139 1 S 50-81-7  
L140 9 S 50-81-7/CRN AND 59-46-1/CRN  
L141 1 S L140 AND ZN/ELS

FILE 'HCAPLUS' ENTERED AT 13:59:55 ON 25 JUL 1999

L142 1 S L141  
L143 5 S L136,L142  
L144 5 S L143 NOT L134

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 14:00:21 ON 25 JUL 1999  
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FILE COVERS 1967 - 25 Jul 1999 VOL 131 ISS 5  
FILE LAST UPDATED: 24 Jul 1999 (19990724/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d all tot 1144

L144 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 1999 ACS  
AN 1997:140247 HCAPLUS

DN 126:139888  
 TI Treatment of anemia, including HIV infection-associated anemia, with  
 procaine compositions  
 IN Sapse, Alfred T.  
 PA Steroidogenesis Inhibitors, Inc., USA  
 SO PCT Int. Appl., 9 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K  
 CC 1-8 (Pharmacology)  
 Section cross-reference(s): 63  
**FAN.CNT 1**  

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640038	A2	19961219	WO 1996-US5406	19960418

 W: CA, JP  
 RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  
 PRAI US 1995-487038 19950607  
 AB The use of a procaine compn. to treat anemia, with particular applicability to the treatment of anemia assocd. with HIV infection, is disclosed. A procaine/zinc/ascorbic acid/potassium compn. for the treatment of anemia is also disclosed.  
 ST zinc ascorbate potassium procaine anemia treatment; HIV infection assocd anemia treatment procaine  
 IT T cell (lymphocyte)  
     (CD4+; procaine compns. for treatment of anemia, including HIV infection-assocd. anemia, in relation to increase of CD4 cell count)  
 IT AIDS (disease)  
 Anemia (disease)  
 Drug delivery systems  
 Human immunodeficiency virus  
     (procaine compns. for treatment of anemia, including HIV infection-assocd. anemia)  
 IT 50-81-7, Ascorbic acid, biological studies  
 59-46-1, Procaine 7440-09-7, Potassium, biological studies 7440-66-6, Zinc, biological studies  
 186646-39-9, Anticort  
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
     (procaine compns. for treatment of anemia, including HIV infection-assocd. anemia)  
  
 L144 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 1999 ACS  
 AN 1990:637859 HCAPLUS  
 DN 113:237859  
 TI Pharmaceutical composition containing a complexing agent and procaine for the treatment of symptoms from narcotic addiction, tinnitus, and Alzheimer's disease  
 IN Sapse, Alfred T.  
 PA USA  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC ICM A61K027-00  
 NCL 514810000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4956391	A	19900911	US 1988-233247	19880817
	US 5064858	A	19911112	US 1990-578030	19900905

PRAI US 1988-233247 19880817

AB A compn. effective in reducing the withdrawal symptoms of recovering narcotic addicts and also in treating the symptoms of age-related conditions, such as tinnitus and Alzheimer's disease comprises **procaine** and a complexing agent, such as **ascorbic acid**, pantothenic acid, acetylsalicylic acid, and amino acids. The complexing agent prevents an unwanted hydrolysis of the **procaine** which would normally occur if the **procaine** is not protected. An injection soln. contained **procaine-HCl** 4, **ascorbic acid** 2 g, NaCl 14.652, chlorobutanol 16.65 mg, HCl/NaOH q.s., and water up to 100 mL.

ST narcotic addiction **procaine** complex injection; tinnitus Alzheimer disease **procaine** complex; ascorbate **procaine** tinnitus Alzheimer narcotic addiction

IT Narcotics  
(addiction to, treatment of, with compn. contg. **procaine** and complexing agent)

IT Amino acids, biological studies  
RL: BIOL (Biological study)  
(narcotic addiction and age-related conditions treatment with compn. contg. **procaine** and)

IT Mental disorder  
(Alzheimer's disease, treatment of, with compn. contg. **procaine** and complexing agent)

IT Hearing  
(disorder, tinnitus, treatment of, with compn. contg. **procaine** and complexing agent)

IT Pharmaceutical dosage forms  
(injections, of **procaine**, complexing agent in, for hydrolysis prevention)

IT 59-46-1, **Procaine**  
RL: BIOL (Biological study)  
(narcotic addiction and age-related conditions treatment with compn. contg. complexing agent and)

IT 50-78-2 50-81-7, **Ascorbic acid**, biological studies 79-83-4, Pantothenic acid  
RL: BIOL (Biological study)  
(narcotic addiction and age-related conditions treatment with compn. contg. **procaine** and)

IT 57-41-0, **Phenytoin** 137-58-6, **Lidocaine**  
546-46-3, **Zinc citrate** 4205-90-7  
RL: BIOL (Biological study)  
(narcotic addiction and age-related conditions treatment with compn. **procaine** and complexing agent and)

L144 ANSWER 3 OF 5 HCPLUS COPYRIGHT 1999 ACS

AN 1990:402025 HCPLUS

DN 113:2025

TI Bacteriostatic and bactericidal composition and methods of use thereof

IN Sapse, Alfred T.

PA USA

SO PCT Int. Appl., 47 pp.

DT CODEN: PIXXD2  
 LA Patent  
 English  
 IC ICM A23B004-20  
 ICS A23B004-22; A23B004-24; A23B005-14; A23B005-16; A23B005-18;  
 A23C003-08; C12N009-36  
 CC 5-2 (Agrochemical Bioregulators)  
 Section cross-reference(s): 17, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9004331	A1	19900503	WO 1989-US4576	19891013
	W: JP, US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	EP 366869	A2	19900509	EP 1989-112992	19890714
	EP 366869	A3	19910612		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 2000849	AA	19900417	CA 1989-2000849	19891017

PRAI US 1988-258606 19881017

AB The title compn. contains lysozyme and can be used for extension the shelf-life of fresh foods and milk and enhancing the antibacterial activity of denture cleaners and mouthwashes. The a lysozyme (5 mg) compn. prep'd. from egg white, adjusted to pH 3.5 and contg. 15 ng ascorbic acid and 1.5 mg Zn showed strong antibacterial effect against *Salmonella typhimurium*, as compared to lysozyme compn. adjusted at pH 6.6. The antibacterial activity of lysozyme in fresh food, e.g. hamburger, mayonnaise, fish, juices, cabbage, chicken is reported. Denture cleaners and mouthwashes contg. lysozyme showed resistance against *Candida albicans*. The heat resistance of lysozyme was improved in the presence of the mineral component, e.g., Zn or I and the acid or acid-immunomodulating agent.

ST lysozyme bactericide food dental material

IT Beverages

Cheese

Egg yolk

Fish

Mayonnaise

Meat

Milk

(bactericides for, contg. lysozyme)

IT Oils, glyceridic

RL: BIOL (Biological study)

(bactericides for, contg. lysozyme)

IT Mineral elements

Amino acids, biological studies

Fatty acids, biological studies

Trace elements, biological studies

RL: BIOL (Biological study)

(lysozyme bacteriostatic and bactericidal compn. contg., for food and dental materials)

IT Dairy products

Egg white

(lysozyme from, bactericidal compns. contg.)

IT Bactericides, Disinfectants, and Antiseptics

Mouthwashes

(lysozyme-contg.)

IT Dentifrices

(denture cleansers, lysozyme-contg.)

IT Milk preparations

(yogurt, bactericides for, contg. lysozyme)  
 IT 9001-63-2, Lysozyme  
 RL: BIOL (Biological study)  
 (bacteriostatic and bactericidal compns. contg., for food and dental materials)  
 IT 50-78-2, Acetylsalicylic acid 50-81-7, Ascorbic acid, biological studies 59-30-3, Folic acid, biological studies 60-33-3, Linoleic acid, biological studies 65-85-0, Benzoic acid, biological studies 79-83-4, Pantothenic acid 87-69-4, biological studies 124-07-2, Octanoic acid, biological studies 150-13-0, p-Aminobenzoic acid 7439-89-6, Iron, biological studies 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-24-6, Strontium, biological studies 7440-33-7, Tungsten, biological studies 7440-41-7, Beryllium, biological studies 7440-47-3, Chromium, biological studies 7440-50-8, Copper, biological studies 7440-56-4, Germanium, biological studies 7440-66-6, Zinc, biological studies 7553-56-2, Iodine, biological studies 7782-49-2, Selenium, biological studies 9054-89-1  
 RL: BIOL (Biological study)  
 (lysozyme bacteriostatic and bactericidal compn. contg., for food and dental materials)  
 IT 1984-06-1, Sodium caprylate  
 RL: BIOL (Biological study)  
 (lysozyme bacteriostatic and bactericidal compns. contg., for food)

L144 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 1999 ACS

AN 1977:557198 HCAPLUS

DN 87:157198

TI Treating depression

IN Sapse, Alfred T.

PA Rom-Amer Pharmaceuticals, Ltd., USA

SO U.S., 9 pp.

CODEN: USXXAM

DT Patent

LA English

IC A61K031-245

NCL 424310000

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4041174	A	19770809	US 1974-498176	19740816
AB	Injection and oral compns. for treating human depression contained a local anesthetic, an org. acid, a sulfite salt, and an acid salt. E.g., elderly patients with at least mild depressive disorders treated for 4 weeks with injections contg. procaine-HCl [51-05-8] 0.1000, benzoic acid [65-85-0] 0.0060, K2S2O5 0.0050, Na2HPO4 0.0005 g and water to make 5cc showed significant improvement.				
ST	anesthetic compn antidepressant				
IT	Antidepressants (anesthetic-contg. compns.)				
IT	Anesthetics (local, antidepressant compns. contg.)				
IT	7558-79-4	16731-55-8			
RL: BIOL (Biological study)					
	(in antidepressant compns.)				
IT	51-05-8	65-85-0	biological studies		
RL: BIOL (Biological study)					
	(in pharmaceutical compn., for depressant treatment)				

L144 ANSWER 5 OF 5 HCPLUS COPYRIGHT 1999 ACS  
 AN 1972:49949 HCPLUS  
 DN 76:49949  
 TI Antibacterial lysozyme preparations  
 IN Crowell, Wilfred J.; Sapse, Alfred T.; Sercarz, Eli E.  
 PA Lysozyme Products, Inc.  
 SO Ger. Offen., 22 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC A61K  
 CC 63 (Pharmaceuticals)  
 Section cross-reference(s): 3

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2126204	A	19711209	DE 1971-2126204	19710526
	ES 391536	A1	19730616	ES 1971-391536	19710525
	FR 2100687	A5	19720324	FR 1971-18999	19710526

PRAI US 1970-41119 19700527

AB The title preps., for oral and external use, e.g. as tooth pastes, mouth washes, eye drops, nasal sprays, skin moistening agents, food additives, and disinfectants, contained lysozyme (I), H<sub>2</sub>O<sub>2</sub>, and ascorbic acid, citric acid (II), tartaric acid, glycine, or cysteine. Thus, an aq. soln. contg. 100 .mu.g I/ml, 20 .mu.g II/ml, and 1 mg H<sub>2</sub>O<sub>2</sub>/ml caused 100% destruction of *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Escherichia coli*, and *Bacillus subtilis* after 30 min. A vaginal spray contained I.HCl 0.200, II 2.000, Na perborate 2.000, lactose 2.000, and balance H<sub>2</sub>O to 100.000 ml.

ST pharmaceutical lysozyme; antibacterial lysozyme compn; bladder rinsing lysozyme; tear artificial lysozyme; shampoo lysozyme; nasal spray lysozyme; acne lotion lysozyme; vaginal spray lysozyme

IT Bactericides, Disinfectants and Antiseptics  
 (lysozyme compns.)

IT 9066-59-5

RL: BIOL (Biological study)  
 (pharmaceutical bactericidal compns.)

IT 50-81-7, biological studies 52-90-4, biological studies  
 77-92-9, biological studies 87-69-4 134-03-2 6000-43-7 7722-84-1,  
 biological studies

RL: BIOL (Biological study)  
 (pharmaceutical bactericidal compns., contg. lysozyme)

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E1 THROUGH E8 ASSIGNED

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STRUCTURE FILE UPDATES: 24 JUL 99 HIGHEST RN 228878-07-7  
 DICTIONARY FILE UPDATES: 24 JUL 99 HIGHEST RN 228878-07-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 13, 1999

Please note that search-term pricing does apply when

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=> s e1-e8

1 50-81-7/BI  
(50-81-7/RN)  
1 59-46-1/BI  
(59-46-1/RN)  
1 7440-66-6/BI  
(7440-66-6/RN)  
1 137-58-6/BI  
(137-58-6/RN)  
1 186646-39-9/BI  
(186646-39-9/RN)  
1 4205-90-7/BI  
(4205-90-7/RN)  
1 51-05-8/BI  
(51-05-8/RN)  
1 57-41-0/BI  
(57-41-0/RN)  
L145 8 (50-81-7/BI OR 59-46-1/BI OR 7440-66-6/BI OR 137-58-6/BI OR  
186646-39-9/BI OR 4205-90-7/BI OR 51-05-8/BI OR 57-41-0/BI)

=> d ide can tot

L145 ANSWER 1 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 186646-39-9 REGISTRY

CN L-Ascorbic acid, mixt. with 2-(diethylamino)ethyl 4-aminobenzoate  
monohydrochloride, disodium hydrogen phosphate, potassium benzoate and  
zinc sulfate (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester, monohydrochloride,  
mixt. contg. (9CI)

CN Benzoic acid, potassium salt, mixt. contg. (9CI)

CN Phosphoric acid, disodium salt, mixt. contg. (9CI)

CN Sulfuric acid, zinc salt (1:1), mixt. contg. (9CI)

OTHER NAMES:

CN Anticort

FS STEREOSEARCH

MF C13 H20 N2 O2 . C7 H6 O2 . C6 H8 O6 . Cl H . H3 O4 P . H2 O4 S . K . 2 Na  
. Zn

CI MXS

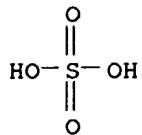
SR CA

LC STN Files: ADISINSIGHT, CA, CAPLUS, PHAR, TOXLIT

CM 1

CRN 7733-02-0 (7664-93-9)

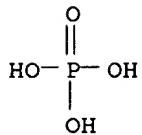
CMF H2 O4 S . Zn



Zn

CM 2

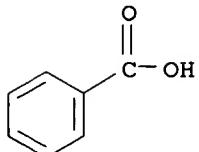
CRN 7558-79-4 (7664-38-2)  
CMF H3 O4 P . 2 Na



2 Na

CM 3

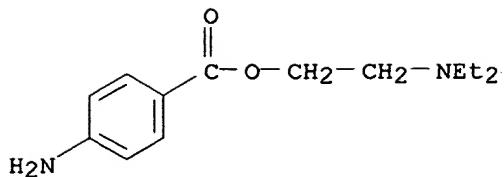
CRN 582-25-2 (65-85-0)  
CMF C7 H6 O2 . K



● K

CM 4

CRN 51-05-8 (59-46-1)  
CMF C13 H20 N2 O2 . Cl H

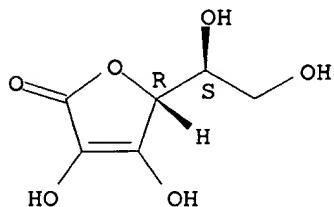


● HCl

CM 5

CRN 50-81-7  
CMF C6 H8 O6

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 126:139888

L145 ANSWER 2 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 7440-66-6 REGISTRY

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN Asarco L 15  
CN Blue powder  
CN Ecka 4  
CN F 1000  
CN F 1000 (metal)  
CN F 1500T  
CN F 2000  
CN F 2000 (metal)  
CN LS 2  
CN LS 2 (element)  
CN LS 4  
CN LS 5  
CN LS 5 (metal)  
CN NC-Zinc  
CN Rheinzink  
CN UF  
CN UF (metal)  
CN VM 4P16

DR 12793-53-2, 195161-85-4, 199281-21-5

MF Zn

CI COM

LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM\*, DDFU, DIPPR\*, DRUGU, EMBASE, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, TOXLINE, TOXLIT, TULSA, ULIDAT, USPATFULL, VETU, VTB

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Zn

181783 REFERENCES IN FILE CA (1967 TO DATE)

9568 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

181895 REFERENCES IN FILE CAPLUS (1967 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:67336

REFERENCE 2: 131:67331

REFERENCE 3: 131:67328

REFERENCE 4: 131:67280

REFERENCE 5: 131:67278

REFERENCE 6: 131:67268

REFERENCE 7: 131:67263

REFERENCE 8: 131:66996

REFERENCE 9: 131:66689

REFERENCE 10: 131:66476

L145 ANSWER 3 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 4205-90-7 REGISTRY

CN 1H-Imidazol-2-amine, N-(2,6-dichlorophenyl)-4,5-dihydro- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Imidazoline, 2-(2,6-dichloroanilino)- (7CI, 8CI)

OTHER NAMES:

CN 2-(2,6-Dichloroanilino)-2-imidazoline

CN 2-(2,6-Dichlorophenylimino)imidazolidine

CN 734571A

CN Clonidin

CN Clonidine

CN M 5041T

CN SKF 34427

FS 3D CONCORD

DR 57066-25-8, 138474-59-6

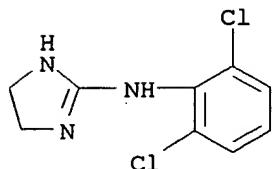
MF C9 H9 Cl2 N3

CI COM

LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABAB, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM, DDFU, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN, USPATFULL, VETU  
 (\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



5319 REFERENCES IN FILE CA (1967 TO DATE)

50 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

5320 REFERENCES IN FILE CAPLUS (1967 TO DATE)

3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:63477

REFERENCE 2: 131:53959

REFERENCE 3: 131:53947

REFERENCE 4: 131:53868

REFERENCE 5: 131:53787

REFERENCE 6: 131:40048

REFERENCE 7: 131:39641

REFERENCE 8: 131:39633

REFERENCE 9: 131:39632

REFERENCE 10: 131:39585

L145 ANSWER 4 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 137-58-6 REGISTRY

CN Acetamide, 2-(diethylamino)-N-(2,6-dimethylphenyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2',6'-Acetoxylidide, 2-(diethylamino)- (8CI)

OTHER NAMES:

CN .alpha.-Diethylamino-2,6-acetoxylidide

CN 2-(Diethylamino)-2',6'-acetoxylidide

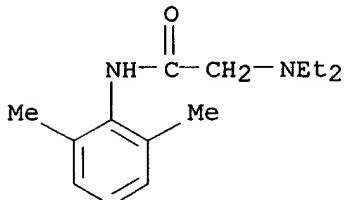
CN Anbesol

CN Anestacon

CN Duncaine

CN Isicaina

CN Isicaine  
 CN Leostesin  
 CN Lidocaine  
 CN Lignocaine  
 CN Maricaine  
 CN Medicaine  
 CN Remicaine  
 CN Rucaina  
 CN Solcain  
 CN Xilina  
 CN Xycaine  
 CN Xylestesin  
 CN Xylene  
 CN Xylocain  
 CN Xylocaine  
 CN Xylocitin  
 FS 3D CONCORD  
 DR 8059-42-5, 8059-66-3, 91484-71-8  
 MF C14 H22 N2 O  
 CI COM  
 LC STN Files: ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN\*,  
 BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT,  
 CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE,  
 HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS,  
 NIOSHTIC, PIRA, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN,  
 USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



5284 REFERENCES IN FILE CA (1967 TO DATE)  
 60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5288 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 31 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:57355  
 REFERENCE 2: 131:53860  
 REFERENCE 3: 131:53599  
 REFERENCE 4: 131:49343  
 REFERENCE 5: 131:39648  
 REFERENCE 6: 131:39641  
 REFERENCE 7: 131:39571

REFERENCE 8: 131:39545

REFERENCE 9: 131:39442

REFERENCE 10: 131:39185

L145 ANSWER 5 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 59-46-1 REGISTRY

CN Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzoic acid, p-amino-, 2-(diethylamino)ethyl ester (8CI)

OTHER NAMES:

CN .beta.- (Diethylamino)ethyl p-aminobenzoate

CN .beta.-Diethylaminoethyl 4-aminobenzoate

CN 2-(Diethylamino)ethyl p-aminobenzoate

CN 2-Diethylaminoethyl 4-aminobenzoate

CN 4-Aminobenzoic acid 2-(diethylamino)ethyl ester

CN 4-Aminobenzoic acid diethylaminoethyl ester

CN Diethylaminoethyl p-aminobenzoate

CN Duracaine

CN Nissocaine

CN p-Aminobenzoic acid 2-diethylaminoethyl ester

CN Procain

CN Procaine

CN Procaine base

CN Spinocaine

CN Vitamin H3

FS 3D CONCORD

DR 91484-72-9

MF C13 H20 N2 O2

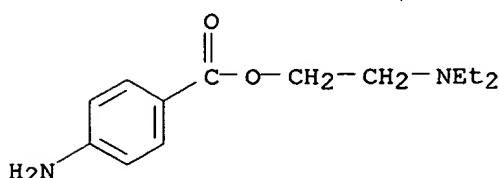
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DETHERM\*, DDFU, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NIOSHTIC, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



2149 REFERENCES IN FILE CA (1967 TO DATE)

35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2149 REFERENCES IN FILE CAPLUS (1967 TO DATE)

58 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:28213

REFERENCE 2: 131:27803

REFERENCE 3: 131:14954

REFERENCE 4: 131:13852

REFERENCE 5: 131:13848

REFERENCE 6: 131:13766

REFERENCE 7: 130:359083

REFERENCE 8: 130:335811

REFERENCE 9: 130:332708

REFERENCE 10: 130:332707

L145 ANSWER 6 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 57-41-0 REGISTRY

CN 2,4-Imidazolidinedione, 5,5-diphenyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Hydantoin, 5,5-diphenyl- (8CI)

OTHER NAMES:

CN 5,5-Diphenyl-2,4-imidazolidinedione

CN 5,5-Diphenylhydantoin

CN Aleviatin

CN Denyl

CN Di-Hydan

CN Di-Lan

CN Dihycon

CN Dilabid

CN Dintoina

CN Diphantoin

CN Diphedan

CN Diphenylan

CN Diphenylhydantoin

CN DPH

CN Hidental

CN Lepitoin

CN Phentyoin

CN Phentyoine

CN Sodanton

CN Zentropil

FS 3D CONCORD

DR 125-59-7

MF C15 H12 N2 O2

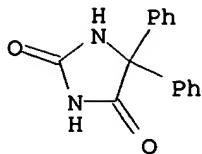
CI COM

LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PIRA, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, ULIDAT, USAN, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



5177 REFERENCES IN FILE CA (1967 TO DATE)  
 95 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5184 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:63323

REFERENCE 2: 131:58758

REFERENCE 3: 131:56155

REFERENCE 4: 131:56144

REFERENCE 5: 131:54233

REFERENCE 6: 131:53892

REFERENCE 7: 131:53545

REFERENCE 8: 131:53535

REFERENCE 9: 131:53421

REFERENCE 10: 131:39647

L145 ANSWER 7 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 51-05-8 REGISTRY

CN Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester, monohydrochloride  
 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzoic acid, p-amino-, 2-(diethylamino)ethyl ester, monohydrochloride  
 (8CI)

OTHER NAMES:

CN 2-Diethylaminoethyl p-aminobenzoate hydrochloride

CN Allocaine

CN Aminocaine

CN Anadolor

CN Anesthesol

CN Anestil

CN Atoxicocaine

CN Bernacaine

CN Cetain

CN Chlorocaine

CN Diethylaminoethanol 4-aminobenzoate hydrochloride

CN Ethocain

CN Ethocaine

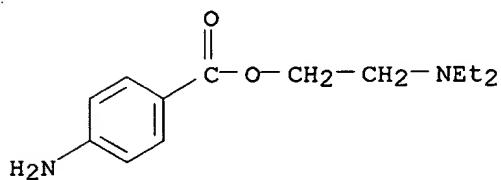
CN Eugerase

CN Geriocaine

CN Gerovital H3

CN Herocaine

CN Irocaine  
 CN Isocain  
 CN Isocaine  
 CN Isocaine-Heisler  
 CN Juvocaine  
 CN Kerocaine  
 CN Lactocaine  
 CN Naucain  
 CN Naucaine  
 CN Neocaine  
 CN Neotonocaine  
 CN Novocain  
 CN Novocaine  
 CN Novocaine hydrochloride  
 CN Omnicain  
 CN Paracain  
 CN Planocaine  
 CN Polocaine  
 CN Procaine hydrochloride  
 CN Procaine monohydrochloride  
 CN Scurocaine  
 CN Sevicaine  
 CN Syncaine  
 CN Topokain  
 CN Westocaine  
 DR 12663-50-2, 8023-03-8, 138481-13-7, 41585-82-4  
 MF C13 H20 N2 O2 . Cl H  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA,  
     CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM,  
     DETERM\*, EMBASE, GMELIN\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,  
     MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, TOXLINE,  
     TOXLIT, USAN, USPATFULL  
     (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
     (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 CRN (59-46-1)



● HCl

2243 REFERENCES IN FILE CA (1967 TO DATE)  
 17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2243 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 23 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:51393

REFERENCE 2: 131:39648

REFERENCE 3: 131:9619

REFERENCE 4: 130:301572

REFERENCE 5: 130:292512

REFERENCE 6: 130:245913

REFERENCE 7: 130:242300

REFERENCE 8: 130:242236

REFERENCE 9: 130:223871

REFERENCE 10: 130:223781

L145 ANSWER 8 OF 8 REGISTRY COPYRIGHT 1999 ACS

RN 50-81-7 REGISTRY

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN (+)-Ascorbic acid

CN 3-keto-L-Gulofuranolactone

CN 3-Oxo-L-gulofuranolactone

CN Adenex

CN Allercorb

CN Antiscorbie vitamin

CN Antiscorbutic vitamin

CN Ascoltin

CN Ascorbajen

CN Ascorbic acid

CN Ascorbutina

CN Ascorin

CN Ascorteal

CN Ascorvit

CN C-Quin

CN C-Vimin

CN Cantan

CN Cantaxin

CN Catavin C

CN Ce-Mi-Lin

CN Ce-Vi-Sol

CN Cebicure

CN Cebion

CN Cebione

CN Cecon

CN Cegiolan

CN Ceglion

CN Celaskon

CN Celin

CN Cemagyl

CN Cenetone

CN Cereon

CN Cergona

CN Cescorbat

CN Cetamid

CN Cetemican

CN Cevalin

CN Cevatine  
 CN Cevex  
 CN Cevimin  
 CN Cevital  
 CN Cevitamic acid  
 CN Cevitamin  
 CN Cevitan  
 CN Cevitex  
 CN Chewcee  
 CN Ciamin  
 CN Cipca  
 CN Citrovit  
 CN Colascor

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
DISPLAY

FS STEREOSEARCH

DR 56533-05-2, 57304-74-2, 57606-40-3, 56172-55-5, 129940-97-2, 14536-17-5,  
50976-75-5, 89924-69-6, 30208-61-8

MF C6 H8 O6

CI COM

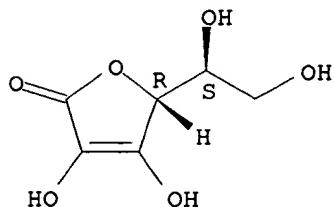
LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT,  
APIPAT2, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABAB, CANCERLIT, CAOLD,  
CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CIN,  
CSCHEM, CSNB, DETHERM\*, DDFU, DIPPR\*, DRUGU, EMBASE, GMELIN\*, HODOC\*,  
HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT,  
NIOSHTIC, PDLCOM\*, PIRA, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT,  
TULSA, ULIDAT, USAN, USPATFULL, VETU, VTB

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



37531 REFERENCES IN FILE CA (1967 TO DATE)

898 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

37563 REFERENCES IN FILE CAPLUS (1967 TO DATE)

12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:67338

REFERENCE 2: 131:67290

REFERENCE 3: 131:67223

REFERENCE 4: 131:64872

REFERENCE 5: 131:64860

REFERENCE 6: 131:63564

REFERENCE 7: 131:63539

REFERENCE 8: 131:63471

REFERENCE 9: 131:63463

REFERENCE 10: 131:63317

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FILE COVERS 1967 - 25 Jul 1999 VOL 131 ISS 5  
FILE LAST UPDATED: 24 Jul 1999 (19990724/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d bib abs hitrn tot 1134

L134 ANSWER 1 OF 33 HCAPLUS COPYRIGHT 1999 ACS  
AN 1999:103039 HCAPLUS  
DN 130:332308  
TI Clinical experience and choice of drug therapy for **human immunodeficiency** virus disease  
AU Brosgart, Carol L.; Mitchell, Thomas F.; Coleman, Rebecca L.; Dyner, Toby; Stephenson, Kathryn E.; Abrams, Donald I.  
CS Community Consortium, University of California San Francisco AIDS Program at San Francisco General Hospital, San Francisco, CA, USA  
SO Clin. Infect. Dis. (1999), 28(1), 14-22  
CODEN: CIDIEL; ISSN: 1058-4838  
PB University of Chicago Press  
DT Journal  
LA English  
AB To det. if providers experienced in the management of **human immunodeficiency** virus (**HIV**) disease preferred different treatment regimens than providers with less experience, we analyzed data from a national survey of primary care providers' preferred regimens for the management of 30 **HIV**-related medical conditions. We mailed questionnaires to 999 correct addresses of providers in > 20 cities in the United States in May 1996. We received 524 responses (response rate, 52%). We found a statistically significant assocn. between the no. of **HIV**-infected patients cared for by the provider and the likelihood that the provider would report prescribing highly active antiretroviral therapy and multidrug **combinations** for treatment of opportunistic infections. Providers with few **HIV**-infected patients were substantially less likely to report using new therapeutic regimens or new diagnostic tools. We concluded that the preferred regimens of experienced providers are more likely to be consistent with the latest information on treatment for **HIV** disease than are those of less experienced providers.  
IT 9068-38-6, Reverse transcriptase  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; mono- and combination antiretroviral therapy for

HIV-related disease and prophylaxis for opportunistic infections: clin. experience)

IT 65277-42-1, Ketoconazole

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (mono- and combination antiretroviral therapy for HIV-related disease and prophylaxis for opportunistic infections: clin. experience)

L134 ANSWER 2 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1998:749754 HCAPLUS

DN 130:119007

TI Prediction of aryl hydrocarbon receptor-mediated enzyme induction of drugs and chemicals by mRNA quantification

AU Froetschl, Roland; Chichmanov, Lubomir; Kleeberg, Ullrich; Hildebrandt, Alfred G.; Roots, Ivar; Brockmoeller, Juergen

CS Institute of Clinical Pharmacology, University Hospital Charite, Berlin, D-10098, Germany

SO Chem. Res. Toxicol. (1998), 11(12), 1447-1452

CODEN: CRTOEC; ISSN: 0893-228X

PB American Chemical Society

DT Journal

LA English

AB Enzyme-specific testing for drug interactions by in vitro techniques has become a routine practice in drug development. With many drugs, enzyme induction has similar importance for the prediction of drug-drug interactions. The authors developed a method for recognizing enzyme induction mediated via the aryl hydrocarbon receptor. This type of induction may be clin. important since exptl. data suggest a higher rate of toxification in induced subjects. Twenty-four drugs and environmental chems., selected as prototype inducers or being chem. related to known inducers, including HIV **protease** inhibitors **nelfinavir**, **saquinavir**, **ritonavir**, and **indinavir**, were tested for their potency to induce cytochrome P 450 1A1 mRNA in human Hela cell cultures by a quant. **reverse transcriptase** polymerase chain reaction. Known prototype inducers such as **.beta.-naphthoflavone** and **3-methylcholanthrene** exhibited the highest inducing potency quantified with an **I<sub>max</sub>** value (maximal induction of cytochrome P 450 1A1 mRNA synthesis) of 5.48 and 10.7 .times. 10<sup>6</sup> mRNA mols. per 150 ng of total RNA, resp. The enzyme-inducing efficacy of some compds. such as **resveratrol** (2.92 .times. 10<sup>6</sup>) and the **protease** inhibitors was not much lower (2.23-3.08 .times. 10<sup>6</sup>). All compds. that were structurally similar to benzimidazoles exhibited some extent of enzyme induction; e.g., **I<sub>max</sub>** values were 0.86 .times. 10<sup>6</sup>, 0.20 .times. 10<sup>6</sup>, and 0.14 .times. 10<sup>6</sup> for **omeprazole**, **lansoprazole**, and **losartan**, resp. To predict the clin. relevance of these inducing effects, the concn. at half-maximal induction **I<sub>M</sub>** was estd.; the plasma concns. of these drug substances were within 1 order of magnitude of the **I<sub>M</sub>** values, upon usual dosage. In conclusion, cytochrome P 450 1A1 enzyme induction by drugs is a common phenomenon, though there is a great range in the inducing efficacy. In vitro prediction of enzyme induction may be useful for explaining or foreseeing drug interactions, drug side effects, or toxicity by xenobiotics.

IT 57-41-0, Phenytoin

RL: ANT (Analyte); ANST (Analytical study) (prediction of aryl hydrocarbon receptor-mediated enzyme induction of drugs and chems. by mRNA quantification)

L134 ANSWER 3 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1998:741808 HCAPLUS

DN 130:133613  
TI Ritonavir: clinical pharmacokinetics and interactions with other anti-  
HIV agents  
AU Hsu, Ann; Granneman, G. Richard; Bertz, Richard J.  
CS Abbott Laboratories, Abbott Park, IL, USA  
SO Clin. Pharmacokinet. (1998), 35(4), 275-291  
CODEN: CPKNDH; ISSN: 0312-5963  
PB Adis International Ltd.  
DT Journal  
LA English  
AB Ritonavir is 1 of the 4 potent synthetic HIV protease inhibitors, approved by the US Food and Drug Administration (FDA) between 1995 and 1997, that have revolutionized HIV therapy. The extent of oral absorption is high and is not affected by food. Within the clin. concn. range, ritonavir is approx. 98 to 99% bound to plasma proteins, including albumin and .alpha.1-acid glycoprotein. Cerebrospinal fluid (CSF) drug concns. are low in relation to total plasma concn. However, parallel decreases in the viral burden have been obsd. in the plasma, CSF and other tissues. Ritonavir is primarily metabolized by cytochrome P 450 (CYP) 3A isoenzymes and, to a lesser extent, by CYP2D6. Four major oxidative metabolites have been identified in humans, but are unlikely to contribute to the antiviral effect. About 34% and 3.5% of a 600mg dose is excreted as unchanged drug in the feces and urine, resp. The clin. relevant  $t_{1/2}$  is about 3 to 5 h. Because of auto-induction, plasma concns. generally reach steady state 2 wk after the start of administration. The pharmacokinetics of ritonavir are relatively linear after multiple doses, with apparent oral clearance averaging 7 to 9 L/h. In vitro, ritonavir is a potent inhibitor of CYP3A. In vivo, ritonavir significantly increases the AUC of drugs primarily eliminated by CYP3A metab. (e.g. clarithromycin, ketoconazole, rifabutin, and other HIV protease inhibitors, including indinavir, saquinavir and nelfinavir) with effects ranging from an increase of 77% to 20-fold in humans. It also inhibits CYP2D6-mediated metab., but to a significantly lesser extent (145% increase in desipramine AUC). Since ritonavir is also an inducer of several metabolizing enzymes [CYP1A4, glucuronosyl transferase (GT), and possibly CYP2C9 and CYP2C19], the magnitude of drug interactions is difficult to predict, particularly for drugs that are metabolized by multiple enzymes or have low intrinsic clearance by CYP3A. For example, the AUC of CYP3A substrate methadone was slightly decreased and alprazolam was unaffected. Ritonavir is minimally affected by other CYP3A inhibitors, including ketoconazole. Rifampicin (rifampin), a potent CYP3A inducer, decreased the AUC of ritonavir by only 35%. The degree and duration of suppression of HIV replication is significantly correlated with the plasma concns. Thus, the large increase in the plasma concns. of other protease inhibitors when coadministered with ritonavir forms the basis of rational dual protease inhibitor regimens, providing patients with 2 potent drugs at significantly reduced doses and less frequent dosage intervals. Combination treatment of ritonavir with saquinavir and indinavir results in potent and sustained clin. activity. Other important factors with combination regimens include reduced interpatient variability for high clearance agents, and elimination of the food effect on the bioavailability of indinavir.  
IT 65277-42-1, Ketoconazole  
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(ritonavir pharmacokinetics and interactions with other anti-HIV agents in humans)

L134 ANSWER 4 OF 33 HCAPLUS COPYRIGHT 1999 ACS  
AN 1998:488721 HCAPLUS  
DN 129:211257  
TI Characterization of the selectivity and mechanism of human cytochrome P450 inhibition by the **human immunodeficiency virus-protease inhibitor nelfinavir mesylate**  
AU Lillibridge, James H.; Liang, Bai Hong; Kerr, Bradley M.; Webber, Stephanie; Quart, Barry; Shetty, Bhasker V.; Lee, Caroline A.  
CS Agouron Pharmaceuticals Inc., USA  
SO Drug Metab. Dispos. (1998), 26(7), 609-616  
CODEN: DMDSAI; ISSN: 0090-9556  
PB Williams & Wilkins  
DT Journal  
LA English  
AB In vitro studies with human liver microsomes and P 450 probe substrates were performed to characterize selectivity and mechanism of cytochrome P 450 inhibition by **nelfinavir mesylate**. At therapeutic concns. (steady-state plasma concns. .apprx.4 .mu.M), **nelfinavir** was found to be a competitive inhibitor of only testosterone 6.beta.-hydroxylase (CYP3A4) with a K<sub>i</sub> concn. of 4.8 .mu.M. At supratherapeutic concns., **nelfinavir** competitively inhibited dextromethorphan O-demethylase (CYP2D6), S-mephenytoin 4-hydroxylase (CYP2C19), and phenacetin O-deethylase (CYP1A2) with K<sub>i</sub> concns. of 68, 126, and 190 .mu.M, resp. **Nelfinavir** did not appreciably inhibit tolbutamide 4-hydroxylase (CYP2C9), paclitaxel 6.alpha.-hydroxylase (CYP2C8), or chlorzoxazone 6.beta.-hydroxylase (CYP2E1) activities. The inhibitory potency of **nelfinavir** toward CYP3A4 suggested the possibility of in vivo inhibition of this isoform, whereas in vivo inhibition of other P450s was considered unlikely. In a one-sequence crossover study in 12 healthy volunteers, **nelfinavir** inhibited the elimination of the CYP3A substrate terfenadine and the carboxylate metabolite of terfenadine. The 24-h urinary recoveries of 63-hydroxycortisol were reduced by an av. of 27% during **nelfinavir** treatment, consistent with CYP3A inhibition by **nelfinavir**. Inhibition of CYP3A4 by **nelfinavir** in vitro was NADPH-dependent requiring the catalytic formation of a metabolite or a metabolic intermediate. The catechol metabolite of **nelfinavir** (M3) was considered unlikely to be responsible for inhibition as the addn. of catechol O-Me transferase, S-adenosyl methionine, and **ascorbic acid** to the pre-incubation mixt. did not protect against the loss of testosterone 6.beta.-hydroxylase activity. Also, the addn. of M3 to human liver microsomes did not inhibit CYP3A4. Although incubations with **nelfinavir** showed a time- and concn.-dependent loss of CYP3A4 activity, the partial or complete recovery of enzyme activity upon dialysis indicated that inhibition was reversible. Microsomal incubations with **nelfinavir** and NADPH did not result in a loss of spectral P 450 content compared with the NADPH control. Glutathione, N-acetylcysteine, and catalase did not attenuate CYP3A4 inhibition by **nelfinavir**. Collectively, these results suggest that the probable mechanism for CYP3A4 inhibition by **nelfinavir** is a transient metabolic intermediate or stable metabolite that coordinates tightly but reversibly to the heme moiety of the P 450.

L134 ANSWER 5 OF 33 HCAPLUS COPYRIGHT 1999 ACS  
AN 1998:462003 HCAPLUS  
DN 129:239301  
TI **Nelfinavir: a review of its therapeutic efficacy in HIV infection**

AU Jarvis, Blair; Faulds, Diana  
CS Adis International Limited, Auckland, N. Z.  
SO Drugs (1998), 56(1), 147-167  
CODEN: DRUGAY; ISSN: 0012-6667  
PB Adis International Ltd.  
DT Journal; General Review  
LA English  
AB A review with 98 refs. **Nelfinavir** is a selective inhibitor of **HIV protease**, the enzyme responsible for post-translational processing of **HIV propeptides**. In the presence of the drug, immature, noninfectious virus particles are produced. **Nelfinavir** in **combination** with nucleoside **reverse transcriptase** inhibitors (NRTIs), non-nucleoside **reverse transcriptase** inhibitors and/or other **protease** inhibitors profoundly suppresses viral replication. Plasma **HIV RNA** levels (viral load) rapidly fall below the limit of detection (LOD; usually 400 or 500 copies/mL) in the majority of patients. When used in **combination** with NRTIs, **nelfinavir** 1250mg twice daily produced similar results to 3-times-daily **nelfinavir** at a range of total daily dosages. In an ongoing study >70% of adults receiving a **nelfinavir**-based **combination** regimen had plasma **HIV RNA** levels below the LOD (<400 copies/mL) after 84 wk. In addn., 73% of pediatric patients receiving **nelfinavir** plus at least 1 new NRTI had viral loads below the LOD (<400 copies/mL) after 34 wk. Furthermore, CD4+ cell counts generally increased in conjunction with redns. in viral load. **Combination** therapy with **nelfinavir** and saquinavir results in higher saquinavir plasma concns., makes twice-daily administration of saquinavir feasible and may delay the emergence of resistant viral strains. A unique mutation at codon 30 (D30N) of the **protease** gene confers resistance to **nelfinavir**, but **HIV** with the D30N mutation remains fully susceptible to indinavir, ritonavir and saquinavir *in vitro*. Nonetheless, in clin. use, significant cross-resistance is seen with all currently available **protease** inhibitors. Diarrhoea is the most frequently reported adverse event in patients receiving **nelfinavir**-based **combination** therapy and has been reported in up to 32% of **nelfinavir** recipients in randomized trials. Diarrhoea is generally of mild to moderate severity and does not result in wt. loss. Rash, **nausea**, headache and asthenia were each reported in 1toreq.5% of patients. Approx. 5% of patients enrolled in an expanded access program in the US discontinued **nelfinavir** because of adverse events. **Nelfinavir** is metabolized by the cytochrome P 450 system. Several clin. significant pharmacokinetic drug interactions between **nelfinavir** and other drugs (i.e. **ketoconazole**, **rifabutin**, **rifampicin**), including other **protease** inhibitors (i.e. **indinavir**, **ritonavir**, **saquinavir**) have been documented. As with other available **protease** inhibitors, **hyperglycemia**, **hyperlipidemia** and abnormal fat distribution have been reported, albeit infrequently, in assocn. with **nelfinavir**. **Nelfinavir**-based **combination** regimens are well tolerated and produce profound and prolonged suppression of **HIV** replication in adult and paediatric patients. Hence, **nelfinavir** is suitable for inclusion in antiretroviral regimens for initial therapy for **HIV** infection and, alternatively, in regimens for patients unable to tolerate other **protease** inhibitors.

DN 129:183826  
TI zidovudine azido-reductase in human liver microsomes: activation by ethacrynic acid, dipyridamole, and indomethacin and inhibition by human immunodeficiency virus protease inhibitors  
AU Fayz, Shirin; Inaba, T.  
CS Department Pharmacolog, Faculty Medicine, University Toronto, Toronto, ON, M5S1A8, Can.  
SO Antimicrob. Agents Chemother. (1998), 42(7), 1654-1658  
CODEN: AMACQ; ISSN: 0066-4804  
PB American Society for Microbiology  
DT Journal  
LA English  
AB AZT (zidovudine, 3'-azido-3'-deoxythymidine), although metabolized primarily to AZT-glucuronide, is also metabolized to 3'-amino-3'-deoxythymidine (AMT) by redn. of the azide to an amine. The formation of the myelotoxic metabolite AMT has not been well characterized, but inhibition of AMT formation would be of therapeutic benefit. The aim of this study was to identify compds. that inhibit AMT formation. Using human liver microsomes under anaerobic conditions and [2-14C]AZT, Km values of AZT azido-reductase, estd. by radio-thin-layer chromatog., were 2.2 to 3.5 mM. Oxygen completely inhibited this NADPH-dependent redn. Thirteen of the 28 compds. tested inhibited the formation of AMT. In addn. to the CYP3A4 inhibitors ketoconazole, fluconazole, indinavir, ritonavir, and saquinavir, metyrapone strongly inhibited AMT formation. An unexpected finding was the more-than-twofold increase in AMT formation in the presence of ethacrynic acid, dipyridamole, or indomethacin. Such activation of toxic metabolite formation would impair drug therapy.  
IT 65277-42-1, Ketoconazole  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(zidovudine azido-reductase in human liver microsomes and activation by ethacrynic acid and dipyridamole and indomethacin and inhibition by human immunodeficiency virus protease inhibitors)

L134 ANSWER 7 OF 33 HCPLUS COPYRIGHT 1999 ACS  
AN 1998:213357 HCPLUS  
DN 128:289783  
TI Protease inhibitors as inhibitors of human cytochromes P450: high risk associated with ritonavir  
AU Von Moltke, Lisa L.; Greenblatt, David J.; Grassi, Jeffrey M.; Granda, Brian W.; Duan, Su Xiang; Fogelman, Steven M.; Daily, Johanna P.; Harmatz, Jerold S.; Shader, Richard I.  
CS Department of Pharmacology and Experimental Therapeutics and the Division of Clinical Pharmacology, Tufts University School of Medicine and New England Medical Center, Boston, MA, 02111, USA  
SO J. Clin. Pharmacol. (1998), 38(2), 106-111  
CODEN: JCPCBR; ISSN: 0091-2700  
PB Lippincott-Raven Publishers  
DT Journal  
LA English  
AB Four protease inhibitor antiviral agents (ritonavir, indinavir, nelfinavir, saquinavir) were evaluated as in vitro inhibitors of the activity of six human cytochromes using an in vitro model based on human liver microsomes. Ritonavir was a highly potent inhibitor of P 450-3A activity (triazolam hydroxylation), having inhibitory potency slightly less than ketoconazole. Indinavir was also a potent 3A

inhibitor, while nelfinavir and saquinavir were less potent. Ritonavir had high inhibition potency against cytochrome P 450-2C9 (tolbutamide hydroxylation), -2C19 (S-mephenytoin hydroxylation), and -2D6 (dextromethorphan O-demethylation and desipramine hydroxylation), while the other **protease** inhibitors had one or more orders of magnitude lower inhibitory activity against these reactions. None of the **protease** inhibitors had important inhibitory potency against P 450-1A2 (phenacetin O-deethylation) or -2E1 (chlorzoxazone hydroxylation). Thus, among available **protease** inhibitors, ritonavir carries the highest risk of incurring drug interactions due to inhibition of cytochrome P 450 activity.

L134 ANSWER 8 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1998:180782 HCAPLUS

DN 128:256389

TI Immune direction therapy

IN Prendergast, Patrick T.

PA Prendergast, Patrick T., Ire.

SO PCT Int. Appl., 83 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9810787	A2	19980319	WO 1997-IB1086	19970910
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9741320	A1	19980402	AU 1997-41320	19970910
	SE 9900812	A	19990308	SE 1999-812	19990308

PRAI US 1996-25180 19960911

WO 1997-IB1086 19970910

AB Herein is described a specific amino acid sequence which exhibits specific ion (bridge) pair arrays enclosed on at least one side by non polar hydrophobic transmembrane segments, as a mechanism used by many infectious agents and a no. of cytokine inhibitory factors, such as interleukin 10 and prolactin inhibitory factor and alpha-fetoprotein, to not only undermine the hosts **immune** defences but to also allow for the infection of target lymphoid tissue. It has been demonstrated that certain vaccines, when inoculated into a host, produced a range of neutralizing antibodies but failed to prevent infection when that host is later challenged with live infectious organism. This present patent illustrates that when such vaccine inoculation is coupled with passive immunization with mono or polyclonal antibodies to these specific amino acid sequences as specified herein that the host is then capable of overcoming the infectious challenge. Herein is described the therapeutic use of mono or polyclonal antibodies to these said specific sequences as a treatment for **acquired immune deficiency** syndrome (**AIDS**) and other disease states that persist due to the presence of a cytokine inhibitory factor of viral, fungal, bacterial or host origin such as chronic fatigue syndrome where interleukin 10 mimic mols. are responsible for a multitude of disease symptoms identified as indicative of **myalgic** encephalitis. Herein is described the

therapeutic use of mono or polyclonal antibodies to these specific amino acid sequences as a combination therapy with vaccines and anti-viral agents to prevent side effects from certain immune modulation and anti-viral agents (e.g. DHEA and IL-12) which cause enhanced prodn. of Interleukin 10 or AFP mimic mols. during therapy. Also herein is described the therapeutic use of these specific sequences either isolated from the organism source or produced by direct synthesis or recombinant protein synthesis. These peptides when administered to a patient suffering from an autoimmune disease, such as multiple sclerosis (MS), lupus (systemic lupus erythematosus) or diabetes or rheumatoid arthritis as limited examples or to transplant organ recipients, will allow the patient's immune state to be shifted to a Th2 antibody dependent immune response and curtail the Th1 (T cell dependent) immune attack which is evident in such immune malfunctions as MS and graft vs. host disease. Certain dermatol. conditions which are today treated by the use of corticosteroid creams and ointment may also be successfully treated by replacing the corticosteroid with these mimic immunosuppressive AFP/interleukin 10 sequences outlined in this patent.

L134 ANSWER 9 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1998:65902 HCAPLUS

DN 128:123799

TI Antiviral pharmaceutical compositions containing saturated 1,2-dithiaheterocyclic compounds, and uses thereof  
IN Rice, William G.; Schultz, Robert R.; Baker, David C.; Henderson, Louis E.  
PA United States Dept. of Health and Human Services, USA; University of Tennessee Research Corp.; Rice, William G.; Schultz, Robert R.; Baker, David C.; Henderson, Louis E.

SO PCT Int. Appl., 43 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9801440	A2	19980115	WO 1997-US10870	19970703
	WO 9801440	A3	19980514		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9744085	A1	19980202	AU 1997-44085	19970703
PRAI	US 1996-21665		19960705		
	WO 1997-US10870		19970703		
OS	MARPAT 128:123799				
AB	Pharmaceutical compns. including a satd. 1,2-dithiaheterocyclic compd. having antiviral activity are provided. Also provided are a kit contg. the pharmaceutical compn. and methods of treating or preventing viral disease using the compn., as well as methods for inactivating a retrovirus in a body fluid.				

L134 ANSWER 10 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1997:499199 HCAPLUS

DN 127:181141  
 TI Protein occlusion for delivery of small molecules  
 IN Panayotatos, Nikos  
 PA Panayotatos, Nikos, USA  
 SO PCT Int. Appl., 39 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9726275	A1	19970724	WO 1997-US675	19970116
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9722428	A1	19970811	AU 1997-22428	19970116
	EP 886649	A1	19981230	EP 1997-905579	19970116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1996-9804 19960116  
 WO 1997-US675 19970116

AB The present invention relates to complexes between (1) a target-binding moiety; (2) a cavity-forming moiety; and (3) a pharmacol. compd. to be delivered to a target, wherein the pharmacol. compd. is buried inside of the cavity-forming moiety, but not covalently bound to either the target-binding moiety or the cavity-forming moiety. The complexes of this invention may be used as to deliver a pharmacol. compd. to cells, tissues, organs, viruses, microorganisms or other surfaces that are characterized by an entity that binds the target-binding moiety portion of the complex. The present invention also relates to pharmaceutical compns. comprising the non-covalent complexes of this invention. The invention also relates to methods of delivering a pharmacol. compd. to a target in a patient. The present invention also relates to the use of the complexes of this invention for the sepn. of chem. entities from their chiral forms or contaminants.

IT 7440-66-6, Zinc, biological studies  
 RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
 (protein occlusion for delivery of small mols.)

L134 ANSWER 11 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1997:332397 HCAPLUS

DN 126:301796

TI Use of 2-mercaptoethanolamine (2-MEA) and related aminothiol compounds and copper(II)-3,5 diisopropyl salicylates and related compounds in the prevention and treatment of AIDS, cancer, autoimmune disease, microbiological infections, and other diseases

IN Chachoua, Samir

PA Chachoua, Samir, Mex.

SO PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9711666	A2	19970403	WO 1996-IB1059	19960925
	WO 9711666	A3	19970619		
	W: AL, AM, AU, BB, BG, BR, CA, CN, CU, CZ, EE, FI, GE, HU, IS, JP, KE, KG, KP, KR, LK, LR, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2233015	AA	19970403	CA 1996-2233015	19960925
	CA 2233445	AA	19970403	CA 1996-2233445	19960925
	AU 9669990	A1	19970417	AU 1996-69990	19960925
	EP 858327	A2	19980819	EP 1996-931214	19960925
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1995-4281		19950925		
	WO 1996-IB1059		19960925		
AB	New therapeutic compns. and applications of 2-MEA and related aminothiols and copper(II)-3,5-diisopropyl salicylates, solely or in combination with other factors, agents, or processes that are phys., chem. and/or biol.-based, are disclosed. These include precursors, intermediates, end products, catalysts, promoters and/or any factors, agents, or processes involved directly or indirectly from initial application of the compns. to the final result. The methods and compns. of the invention are useful for the treatment of AIDS, cancer, autoimmune disease, and microbiol. infections, as well as other diseases in which immunol. dysfunction and/or free radical formation function as part of the disease mechanism.				
IT	50-81-7, Vitamin C, biological studies RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (mercaptoethanolamine, related aminothiols, copper diisopropyl salicylate, and related compds., alone or in combination, for prevention and treatment of disease)				

L134 ANSWER 12 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1997:329346 HCAPLUS

DN 126:303447

TI Biologically-active polymers

IN Katoot, Mohammad W.

PA Katoot, Mohammad W., USA

SO PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9712989	A1	19970410	WO 1996-US15828	19961002
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
	CA 2233059	AA	19970410	CA 1996-2233059	19961002

AU 9672535	A1 19970428	AU 1996-72535	19961002
EP 882139	A1 19981209	EP 1996-934013	19961002
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
PRAI US 1995-4757	19951002		
US 1996-599888	19960212		
US 1996-22825	19960726		
US 1996-724461	19961001		
WO 1996-US15828	19961002		

AB This invention relates to biol.-active polymers that are useful for analyte detection and isolation and delivery of substances. The biol.-active polymers are capable of specifically and reversibly binding to analytes, including mols. and cells. The biol.-active polymers are also capable of releasing substances upon elec. stimulation. The present invention provides compns. comprising biol.-active polymers membranes and methods for making these biol.-active polymers membranes that may be specifically designed to selectively bind cells and specific cell types, to affect cell growth characteristics, and to modulate cellular differentiation. These biol.-active polymer membranes may be controlled elec. to induce controlled cellular differentiation and modulate the cell growth cycle. These biol.-active polymers have many applications in biol. and chem. fields.

IT 65277-42-1, Ketoconazole

RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(biol. active polymers useful for analyte detection and isolation and delivery of substances)

L134 ANSWER 13 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1997:318204 HCAPLUS

DN 126:292446

TI Therapeutic applications of animal sera including horse serum in the treatment of AIDS, cancer, and other viral and bacterial diseases

IN Chachoua, Samir

PA Chachoua, Samir, Mex.

SO PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9711667	A2	19970403	WO 1996-IB1115	19960925
	WO 9711667	A3	19970612		
	W: AL, AM, AU, BB, BG, BR, CA, CN, CU, CZ, EE, FI, GE, HU, IS, JP, KE, KG, KP, KR, LK, LR, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2233015	AA	19970403	CA 1996-2233015	19960925
	CA 2233445	AA	19970403	CA 1996-2233445	19960925
	AU 9671431	A1	19970417	AU 1996-71431	19960925
	EP 853486	A2	19980722	EP 1996-932773	19960925
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1995-4281 19950925

WO 1996-IB1115 19960925

AB Animal (e.g. horse) antisera raised by using target organism or target organism-contg. patient cell is washed with patient's red blood cell, and used together with pharmaceuticals for treating disease. The target organism and cell includes **AIDS** virus, **HIV**, herpes, cytomegalovirus, pneumocystis, cancer cell, virus, bacteria, etc. The disease include **AIDS**, opportunistic infections, cancer, and viral or bacterial diseases. The pharmaceuticals combination is selected from **AZT**, **DDI**, **2-MEA**, **BHT**, antibiotic, chemotherapeutic agent, radiotherapeutic agent, transfer factor, death sequence factor, antigen, fibroblast ext., etc. Multimodal therapy using Streptococcal phage, **procaine** penicillin, and **P24** antigen as well as horse antiserum against **AIDS** were described.

L134 ANSWER 14 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1997:262222 HCAPLUS

DN 126:272344

TI Antiviral drugs and their enhancers against **HIV**

IN Nakajima, Hideki; Yamada, Kaneo; Igarashi, Toshisato

PA Samu Kenkyusho Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09059178	A2	19970304	JP 1995-240947	19950824

GI

SOD[C(O)(CH<sub>2</sub>)<sub>n</sub>C(O)X]<sub>m</sub> I

AB Antiviral **formulations** contain lecithin-binding human Cu, Zn-SOD (I; X = lyso-lecithin with 2-hydroxy at glycerol; m >1; n >2), **HIV** reverse transcriptase inhibitors (AZT, ddC, and dDI), **HIV** protease inhibitors (e.g. KNI-272), and/or sulfated polysaccharides (e.g. dextran sulfate). Thus, I was prep'd. from human-derived SOD and 2-(4-hydroxycarbonylbutyloyl)lyso-lecithin, and antiviral injections contg. I and other antiviral agents were **formulated**. I in combination with AZT, ddC, dDI, KNI-272, or dextran sulfate had synergistic antiviral actions against **HIV**.

IT 9068-38-6, Reverse transcriptase

RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (inhibitors; antiviral drugs and their enhancers against **HIV**)

L134 ANSWER 15 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1997:249385 HCAPLUS

DN 126:297763

TI Characterization of metal-ion-nucleotide based particulate matter in solutions of 9-[2-(phosphonomethoxy)ethyl]adenine (PMEA)

AU Yuan, Lung-Chi; Visor, Gary C.

CS Dep. of Formulation and Process Development, Gilead Sciences, Incorporated, Foster City, CA, 94404, USA

SO PDA J. Pharm. Sci. Technol. (1997), 51(1), 30-35

PB CODEN: JPHTEU; ISSN: 1076-397X  
 DT PDA, Inc.  
 LA Journal  
 English

AB The antiviral drug 2-[2-(phosphonomethoxy)ethyl]adenine, PMEA, was developed as an i.v. product for the treatment of **human immunodeficiency** virus infection. During the course of stability monitoring, PMEA I.V. injection was found to undergo particulate matter formation under extended storage at ambient temp. Isolation and characterization of the particulates revealed them to be metal ion-PMEA complexes. The principle metal ions assocd. with the particulates were iron and **zinc**, present as trace impurities (.1toreq. 40 ppm) in PMEA drug substance detd. by inductively coupled argon plasma spectroscopy. These visible particles are characterized by energy-dispersive x-ray spectrometry and fourier transform IR spectroscopy. This study describes the systematic evaluation of the obsd. soln. phenomena and details alternative **formulation** systems to eliminate particulate formation in the PMEA injectable product.

IT 7440-66-6, **zinc**, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detn. of iron and **zinc** in **adefovir** injections by inductively coupled argon plasma spectroscopy)

L134 ANSWER 16 OF 33 HCAPLUS COPYRIGHT 1999 ACS  
 AN 1997:98389 HCAPLUS  
 DN 126:194888  
 TI SRR-SB3, a disulfide-containing macrolide that inhibits a late stage of the replicative cycle of **human immunodeficiency** virus  
 AU Witvrouw, M.; Balzarini, J.; Pannecoque, C.; Jhaumeer-Laulloo, S.; Este, J. A.; Schols, D.; Cherepanov, P.; Schmit, J.-C.; Debyser, Z.; Vandamme, A.-M.; Desmyter, J.; Ramadas, S. R.; De Clercq, E.  
 CS Rega Inst. Med. Res., Katholieke Univ. Leuven, Louvain, B-3000, Belg.  
 SO Antimicrob. Agents Chemother. (1997), 41(2), 262-268  
 CODEN: AMACQ; ISSN: 0066-4804  
 PB American Society for Microbiology  
 DT Journal  
 LA English  
 AB From a series of macrocyclin diamides possessing the disulfide linkage, only SRR-SB3, a compd. that complexes with **zinc**, was found to inhibit **human immunodeficiency** virus type 1 (**HIV-1**; strain IIIB) replication at a concn. of 1.8 to 6.5 .mu.g/mL in MT-4, CEM, and peripheral blood mononuclear cells. SRR-SB3 was toxic to MT-4 cells at a concn. of 15.9 .mu.g/mL, resulting in a selectivity index of 9 in these cells. This macrolide was also effective against various other **HIV-1** strains, including clin. isolates and **HIV-1** strains resistant to **protease** inhibitors and nucleoside and nonnucleoside **reverse transcriptase** inhibitors. It was also active against various **HIV-2** strains, simian immunodeficiency virus (strain MAC251), and Moloney murine sarcoma virus, but not against viruses other than retroviruses. In addn., the compd. was found to inhibit chronic **HIV-1** infections in vitro. The compd. in combination with other antiviral agents, such as zidovudine, **zalcitabine**, and stavudine, showed an effect that was between additive and **synergistic**. Time-of-addn. expts. indicated that SRR-SB3 acts at a late stage of the **HIV-1** replicative cycle.

L134 ANSWER 17 OF 33 HCAPLUS COPYRIGHT 1999 ACS  
 AN 1997:3179 HCAPLUS

DN 126:108827  
TI Formulation and characterization of azidothymidine-loaded liposomes  
AU Ravivarapu, Harish; White, Catherine A.  
CS Dep. Pharmaceutics, Univ. Georgia, Athens, GA, 30602, USA  
SO Drug Delivery (1996), 3(4), 223-229  
CODEN: DDELEB; ISSN: 1071-7544  
PB Taylor & Francis  
DT Journal  
LA English  
AB Entrapment efficiency (EE%) and in vitro stability of azidothymidine (AZT)-loaded hand-shaken multilamellar vesicles (MLVs), freeze and thaw vesicles (FATMLVs), and reverse phase evapn. vesicles (REVs) were compared. AZT entrapment in FATMLVs was further studied by varying initial lipid concns., drug concn., and lipid compn. The results suggest that AZT entrapment is dependent on the aq. vol. entrapped within liposomes, and the interaction between the drug and liposomal bilayer may not be significant. Increasing the lipid concn. increases the liposomal entrapment of AZT but the encapsulation yield decreases above a lipid concn. of 30 .mu.mol/mL. No significant difference was obsd. in EE% when the AZT concn. was varied from 5 to mg/mL. The entrapment efficiency was highest (43.2%) for DSPC/CHOL/PS (molar ratio 6:3:3) vesicles but DSPC/CHOL/PS liposomes formulations in a molar ratio of 4:3:3 or 4:5:1 and DSPC/CHOL/SA liposome formulations in a molar ratio of 4:5:1 were more stable in vitro. In vitro drug release from liposomes was dependent on bilayer compn. and the method of prepn.

L134 ANSWER 18 OF 33 HCPLUS COPYRIGHT 1999 ACS  
AN 1996:596349 HCPLUS  
DN 125:237726  
TI The protective role of zinc and N-acetylcysteine in modulating zidovudine-induced hematopoietic toxicity  
AU Gogu, Sudhir R.; Agrawal, Krishna C.  
CS Dep. Pharmacol., Tulane Univ. Sch. Med., New Orleans, LA, 70112, USA  
SO Life Sci. (1996), 59(16), 1323-1329  
CODEN: LIFSAK; ISSN: 0024-3205  
DT Journal  
LA English  
AB The role of Zn<sup>2+</sup> and N-acetylcysteine (NAC) in protecting hematopoietic progenitor cells from zidovudine (AZT)-induced toxicity was studied. Murine bone marrow progenitor cells (BMPC) were exposed to various concns. (0.1-50 .mu.M) of AZT in the presence and absence of Zn(OAc)<sub>2</sub> (100 .mu.M) or NAC (100 .mu.M). The cell survival was detd. by colony-forming assays of erythroid (CFU-E) and granulocytic (CFU-GM) lineage. The IC<sub>50</sub> values of AZT in the presence of Zn<sup>2+</sup> were increased approx. 3-fold (from 3.0 to 9.5 .mu.M) in the CFU-E assay and 7-fold (from 4.3 to 28.8 .mu.M) in the CFU-GM assay, whereas in the presence of NAC, the IC<sub>50</sub> values were increased by 2- and 4-fold, resp. To delineate the mechanism of the protection of BMPC by Zn<sup>2+</sup>, the levels of metallothionein (MT) mRNA were monitored by using a 31-mer cDNA probe. Zn<sup>2+</sup> produced a concn.-dependent increase in MT mRNA in BMPC. These results suggest that dietary Zn<sup>2+</sup> and NAC supplementation can be used to reduce AZT-induced bone marrow toxicity.  
IT 7440-66-6, Zinc, biological studies  
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)  
(zidovudine-induced hematopoietic toxicity inhibition by)

L134 ANSWER 19 OF 33 HCPLUS COPYRIGHT 1999 ACS  
 AN 1996:535077 HCPLUS  
 DN 125:230787  
 TI Covalent microparticle-drug conjugates for biological targeting  
 IN Yatvin, Milton B.; Stowell, Michael H. B.; Gallicchio, Vincent S.;  
 Meredith, Michael J.  
 PA Oregon Health Sciences University, USA  
 SO U.S., 29 pp. Cont.-in-part of U.S. Ser. No. 142, 771.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5543390	A	19960806	US 1994-246941	19940519
	US 5149794	A	19920922	US 1990-607982	19901101
	US 5256641	A	19931026	US 1992-911209	19920709
	US 5543389	A	19960806	US 1993-142771	19931026
	US 5543391	A	19960806	US 1995-441770	19950516
	WO 9532002	A1	19951130	WO 1995-US6180	19950517
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9526393	A1	19951218	AU 1995-26393	19950517
	EP 759784	A1	19970305	EP 1995-921275	19950517
	R: BE, CH, DE, FR, GB, LI, NL, SE				
	US 5840674	A	19981124	US 1996-691891	19960801
PRAI	US 1990-607982		19901101		
	US 1992-911209		19920709		
	US 1993-142771		19931026		
	US 1994-246941		19940519		
	US 1995-441770		19950516		
	WO 1995-US6180		19950517		

AB This invention provides novel methods and reagents for specifically delivering biol. active compds. to phagocytic mammalian cells. The invention also relates to specific uptake of such biol. active compds. by phagocytic cells and delivery of such compds. to specific sites intracellularly. The invention specifically relates to methods of facilitating the entry of antimicrobial drugs and other agents into phagocytic cells and for targeting such compds. to specific organelles within the cell. The invention specifically provides compns. of matter and pharmaceutical embodiments of such compns. comprising conjugates of such antimicrobial drugs and agents covalently linked to particulate carriers generally termed microparticles. In particular embodiments, the antimicrobial drug is covalently linked to a microparticle via an org. linker mol. which is the target of a microorganism-specific protein having enzymic activity. Thus, the invention provides cell targeting of drugs wherein the targeted drug is only released in cells infected with a particular microorganism. Alternative embodiments of such specific drug delivery compns. also contain polar lipid carrier mols. effective in achieving intracellular organelle targeting in infected phagocytic mammalian cells. Particular embodiments of such conjugates comprise antimicrobial drugs covalently linked both to a microparticle via an org. linker mol. and to a polar lipid compd., to facilitate targeting of such drugs to particular

subcellular organelles within the cell. Also provided are porous microparticles impregnated with antimicrobial drugs and agents wherein the surface or outside extent of the microparticle is covered with a degradable coating that is specifically degraded within an infected phagocytic mammalian cell. Methods of inhibiting, attenuating, arresting, combating and overcoming microbial infection of phagocytic mammalian cells in vivo and in vitro are also provided.

L134 ANSWER 20 OF 33 HCPLUS COPYRIGHT 1999 ACS  
 AN 1996:422386 HCPLUS  
 DN 125:76341  
 TI A method for identifying and using compounds that inactivate HIV-1 and other retroviruses by attacking highly conserved zinc fingers in the viral nucleocapsid protein  
 IN Henderson, Louis E.; Arthur, Larry O.; Rice, William G.  
 PA United States Dept. of Health and Human Services, USA  
 SO PCT Int. Appl., 58 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9609406	A1	19960328	WO 1995-US11915	19950919
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9535927	A1	19960409	AU 1995-35927	19950919
EP 782632	A1	19970709	EP 1995-933161	19950919
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
PRAI US 1994-312331	19940923			
WO 1995-US11915	19950919			
OS MARPAT 125:76341				
AB Several classes of compds. (disulfides, maleimides, .alpha.-halogenated ketones, hydrazides, nitric oxide and NO-contg. derivs., cupric ions and complexes thereof, ferric ions and complexes thereof) are provided which can be used to inactivate retroviruses, e.g. HIV-1, by attacking the CCHC zinc fingers of the viral nucleocapsid protein and ejecting the zinc therefrom. In addn., kits for identifying compds. that can react with CCHC zinc fingers of the nucleocapsid proteins of a large no. of different retroviruses have also been developed. The kits of the present invention describe a set of specific tests and reagents that can be used to screen and identify compds. based on their ability to react with and disrupt retroviral zinc fingers in the viral NC proteins and, in turn, inactivate the retrovirus of interest. The effect of e.g. disulfides on HIV-1 is included.				
IT 7440-66-6, Zinc, biological studies				
RL: BPR (Biological process); BIOL (Biological study); PROC (Process) (identification and use of compds. inactivating HIV-1 and other retroviruses by attacking highly conserved zinc fingers in viral nucleocapsid protein)				

L134 ANSWER 21 OF 33 HCPLUS COPYRIGHT 1999 ACS  
 AN 1996:311690 HCPLUS  
 DN 124:333050

TI Improved anti-infective polyoxypropylene/polyoxyethylene copolymers and methods of use

IN Emanuele, R. Martin; Balasubramanian, Mannarsamy; Allaudeen, Hameedsulthan S.

PA Cytrix Corporation, USA

SO PCT Int. Appl., 106 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9604924	A1	19960222	WO 1995-US9637	19950809
	W: AU, CA, JP, KR RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5567859	A	19961022	US 1994-292803	19940809
	US 5674911	A	19971007	US 1995-468137	19950606
	AU 9533598	A1	19960307	AU 1995-33598	19950809
PRAI	US 1994-292803	19940809			
	US 1995-468137	19950606			
	US 1987-17330	19870220			
	US 1988-141668	19880107			
	US 1988-150731	19880216			
	US 1989-419016	19891010			
	US 1991-673289	19910319			
	US 1991-760808	19910916			
	US 1992-847874	19920313			
	US 1993-81006	19930622			
	US 1993-87136	19930702			
	US 1993-161551	19931202			
	US 1995-457808	19950601			
	WO 1995-US9637	19950809			

AB The present invention comprises novel preps. of polyoxypropylene/polyoxyethylene copolymers which retain the therapeutic activity of the com. preps., but substantially reduce the undesirable effects which are inherent in the prior art preps. Because the preps. of polyoxypropylene/polyoxyethylene copolymers which comprise the present invention are a less polydisperse population of mols. than the prior art polyoxypropylene/polyoxyethylene copolymers, the biol. activity of the copolymers is better defined and more predictable and the cardiototoxicity inherent in the native copolymers is substantially reduced. In accordance with the present invention, a compon. and method are provided that is effective in treating infections caused by microorganisms including, but not limited to, bacteria, viruses, protozoa, and fungi. The present invention is effective in inhibiting the growth of bacteria such as Mycobacterium species including, but not limited to, Mycobacterium avium-intracellular complex and M. tuberculosis.

IT 65277-42-1, Ketoconazole

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(infection treatment with anti-infective polyoxypropylene-  
polyoxyethylene block copolymer and drugs)

L134 ANSWER 22 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1996:277730 HCAPLUS

DN 124:331807

TI Inhibition of human immunodeficiency virus-1

reverse transcriptase by heme and synthetic heme analogs

AU Staudinger, Robert; Abraham, Nader G.; Levere, Richard D.; Kappas, Attallah

CS Rockefeller University, New York, NY, 10021-6399, USA  
SO Proc. Assoc. Am. Physicians (1996), 108(1), 47-54  
CODEN: PAAPFD; ISSN: 1081-650X  
DT Journal  
LA English  
AB Heme and a series of synthetic heme analogs were tested for inhibition of human immunodeficiency virus-1 (HIV-1) reverse transcriptase (RT) activity. Heme and the protoporphyrin complexes of cadmium, magnesium, and tin significantly inhibited HIV-1 RT, whereas other metalloporphyrins had a lesser or no effect on the enzyme. The mechanism of inhibition was examined with respect to heme and tin protoporphyrin (SnPP), as both compds. have been utilized clin. as treatment for noninfectious disorders. Heme and SnPP inhibited HIV-1 RT in a noncompetitive manner with respect to deoxythymidine triphosphate. Inhibition depended in part on the protoporphyrin structure, because the meso derivs. of the heme analogs essentially were without effect. Heme also markedly enhanced the inhibitory effect of azidothymidine (zidovudine, AZT) on HIV-1 RT, and the combination of the two compds. showed synergy in inhibiting HIV-1 RT. HIV-1 RT was used to reverse transcribe the glyceraldehyde phosphate dehydrogenase (GAPDH) gene from human kidney. Subsequently, GAPDH cDNA was amplified with Taq polymerase, and electrophoresis showed that HIV-1 RT catalyzed the reverse transcription of human mRNA at a rate comparable to that of Moloney murine leukemia virus. Heme and SnPP prevented cDNA synthesis by HIV-1 RT in this RT-polymerase chain reaction assay. We also examined the effects of these compds. on normal human bone marrow function. Heme stimulated both erythroid and myeloid progenitor colony formation, whereas SnPP was essentially without effect. In contrast, SnPP had a suppressive effect on hematopoiesis. Finally, we show that heme has a sparing effect against the myelotoxicity of AZT. The results of these studies raise the possibility that combination therapy with AZT and heme, or heme plus an inhibitor of heme catabolism, might have therapeutic potential in the acquired immunodeficiency syndrome.  
IT 9068-38-6, Reverse transcriptase  
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)  
(inhibition of human immunodeficiency virus-1  
reverse transcriptase by heme and synthetic heme  
analogs)

L134 ANSWER 23 OF 33 HCPLUS COPYRIGHT 1999 ACS  
AN 1995:924530 HCPLUS  
TI Synthesis of AZT-Pt(terpy) -- a potential compound for  
radiotherapy of aids.  
AU Mirzadeh, Saed; Packard, Alan B.  
CS Nuclear Medicine Group, Oak Ridge National Laboratory, Oak Ridge, TN,  
37831-6229, USA  
SO Book of Abstracts, 210th ACS National Meeting, Chicago, IL, August 20-24  
(1995), Issue Pt. 2, NUCL-009 Publisher: American Chemical Society,  
Washington, D. C.  
CODEN: 61XGAC  
DT Conference; Meeting Abstract  
LA English  
AB The aim of this work is to evaluate a novel approach for the potential control of AIDS using radiotherapy. We propose to evaluate the combined therapeutic effectiveness of the Auger-electron emitter 195mPt when it is attached to AZT and other related nucleoside drugs. Auger electrons penetrate only a short distance in tissue, thus

the radiation dose will be confined to the infected cells only. With this approach, we expect to target not only the infected cells but also the mononuclear macro-phages which engulf the dead cells. It has been shown that chloro(2, 2', 6', 2"-terpyridine)Pt(II)+, Pt(terpy)Cl, is a suitable reagent for modification of proteins by binding to the histidine residues [JACS 109, 4592 (1987)]. Based on these results and those on formation of ternary complexes of Zn(II)-cyclen with AZT [JACS 115, 6730 (1993)], we expected that in neutral solns., the deprotonated imide nitrogen, on the thymine moiety of AZT ( $pK_a = 9.65$ ) would replace the Cl- group of [Pt(terpy)Cl]+. At a 1:1 molar ratio, the above reaction proceeds very slowly with a  $t_{1/2}$  of several days. At 5-fold molar excess of AZT, the reaction is completed within 24 h. The AZT-Pt(terpy) complex was sep'd. from the excess AZT on cation exchanger Sephadex-SP using H<sub>2</sub>O and 0.2 M NaCl as eluent.

L134 ANSWER 24 OF 33 HCPLUS COPYRIGHT 1999 ACS  
 AN 1995:566590 HCPLUS  
 DN 123:7685  
 TI Activity of Cu<sub>2</sub>Zn<sub>2</sub> superoxide dismutase against the human immunodeficiency virus type 1  
 AU Miesel, R.; Mahmood, N.; Weser, U.  
 CS Deutsches Rheuma Forschungs Zentrum, German Rheumatology Research Center, Berlin, D-13353, Germany  
 SO Redox Rep. (1995), 1(2), 99-103  
 CODEN: RDRPE4; ISSN: 1351-0002  
 DT Journal  
 LA English  
 AB The anti-retroviral activity of Cu<sub>2</sub>Zn<sub>2</sub> superoxide dismutase (SOD; EC 1.15.1.1) was tested in Molt-4 cells infected with the human immunodeficiency virus type 1 (HIV-1) and compared to the anti-HIV-1 activity of the reverse transcriptase inhibitors azidothymidine (AZT), dideoxycytidine (ddC), dideoxyuridine (ddU) and phosphonoformic acid, the glucosidase I inhibitors castanospermine and dihydroxymethyl dihydroxy-pyrrolidine (DMDP), the HIV protease inhibitor RO-31-7595 as well as the CD4-masking compd. aurintricarboxylic acid. 300 NM of SOD sufficed to reduce the release of the viral antigen gp120 of HIV-1NDK-infected Molt-4 cells by 50% [EC50]. Cytotoxic effects of SOD were estd. by cell counts and rates of cell growth. SOD, 3 .mu.M, reduced the cell growth of uninfected cells by 50% [TC50]. While copper-free apo-SOD displayed no anti-HIV activity, the [EC50] of heat-inactivated enzyme was 1 .mu.M, suggesting an anti-retroviral effect of low mol. wt. active center degrdn. products of SOD. The [EC50] of SOD reached 10% of AZT's anti-HIV-1NDK activity and exceeded all tested anti-retrovirals 40-3000-fold. The selectivity index ( $Si = [TC50]/[EC50]$ ) for SOD was 10, resembling the reverse transcriptase inhibitors dideoxycytidine and phosphonoformic acid. SOD inhibited also dose-dependently the oxidative stress induced depletion of sulfhydryls, which are crucially involved in the nuclear factor kappa B controlled HIV transcription.

L134 ANSWER 25 OF 33 HCPLUS COPYRIGHT 1999 ACS  
 AN 1994:499130 HCPLUS  
 DN 121:99130  
 TI Amelioration of azidothymidine-induced erythroid toxicity by hemin and stem cell factor in immune-suppressed mice  
 AU Hamburger, Anne W.; Chen, Rong-Bing  
 CS Dep. Pathol., Univ. Md. Cancer Cent., Baltimore, MD, 21201, USA  
 SO Exp. Hematol. (Charlottesville, Va.) (1994), 22(4), 348-52

DT CODEN: EXHMA6; ISSN: 0301-472X  
LA Journal  
LA English  
AB Recombinant cytokines such as stem cell factor (SCF) are currently being tested for the ability to ameliorate 3'azido-3'deoxythymidine (AZT)-induced anemia in AIDS patients. Recently, the authors showed that SCF greatly increased burst-forming units-erythroid (BFU-E) but failed to increase hematocrits of AZT-treated immune-deficient (MAIDS) mice. The authors reasoned that hemin, previously shown to both enhance BFU-E proliferation and accelerate erythroid maturation, might bring about differentiation of this large SCF-induced pool of BFU-E and further protect BFU-E from AZT's toxic effect. The authors therefore studied, in vitro, the effect of combinations of hemin and SCF on growth of BFU-E from MAIDS mice. Hemin, at concns. of 10 to 100 .mu.M, ameliorated the growth-inhibitory effect of AZT. 50 .mu.M hemin increased the ED50 of AZT from 1.times.10<sup>-7</sup>M to 1.7.times.10<sup>-6</sup>M. SCF also ameliorated AZT-induced toxicity, but to a lesser extent. SCF and hemin increased the no. of BFU-E colonies obsd. in the presence of AZT in an additive fashion. The resistance of BFU-E to AZT's cytotoxic effect was greater in cultures receiving hemin and SCF together than in cultures receiving SCF or hemin alone. Zinc and tin protoporphyrins (Zn and Sn PP) increased the nos. of BFU-E obsd. However, neither zinc nor tin protoporphyrins increased the ED50 of AZT. Combinations of SCF and hemin may prove useful in ameliorating AZT toxicity in both immune-suppressed mice and human immunodeficiency virus (HIV)-infected patients.

L134 ANSWER 26 OF 33 HCAPLUS COPYRIGHT 1999 ACS  
AN 1994:474117 HCAPLUS  
DN 121:74117  
TI inhibition of 3'-azido-3'-deoxythymidine-resistant HIV-1 infection by dehydroepiandrosterone in vitro  
AU Yang, Jyh-Yuan; Schwartz, Arthur; Henderson, Earl E.  
CS Sch. Med., Temple Univ., Philadelphia, PA, 19140, USA  
SO Biochem. Biophys. Res. Commun. (1994), 201(3), 1424-32  
CODEN: BBRCA9; ISSN: 0006-291X  
DT Journal  
LA English  
AB Human immunodeficiency virus type 1 (HIV-1) isolated from patients with acquired immunodeficiency syndrome (AIDS) shows resistance to 3' azido-3' deoxythymidine (AZT) after one or two years of treatment. The authors investigated whether DHEA treatment could inhibit replication of AZT-resistant strains of HIV-1. Addn. of DHEA to MT-2 cell cultures infected with either AZT-sensitive or AZT-resistant isolates of HIV-1 resulted in dose-dependent inhibition of HIV-1-induced cytopathic effect and suppression of HIV-1 replication as measured by accumulation of reverse transcriptase activity. At a concn. as low as 50 .mu.M, DHEA reduced AZT-resistant HIV-1 replication over 50% as measured by cytopathic effect and accumulation of reverse transcriptase activity. This study provides evidence that DHEA can inhibit the replication of AZT-resistant as well as wild-type HIV-1. Since the main target for DHEA are metabolic and cellular signaling pathways leading to HIV-1 replication-activation, DHEA should be effective against multidrug-resistant strains of HIV-1.

Combined with recently discovered immunoregulatory properties, the finding that DHEA is able to inhibit replication of both wild-type and AZT-resistant HIV-1 suggests that in vivo DHEA may have a much broader spectrum of action than originally anticipated.

IT 53-43-0, Dehydroepiandrosterone  
 RL: BIOL (Biological study)  
 (AZT-resistant HIV-1 replication inhibition by)

L134 ANSWER 27 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1994:200438 HCAPLUS

DN 120:200438

TI Controlled-release transdermal pharmaceuticals containing cyrogels  
 IN Wood, Louis L.; Calton, Gary J.

PA SRCHEM Inc., USA

SO U.S., 15 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5260066	A	19931109	US 1992-821627	19920116
	US 5288503	A	19940222	US 1992-899369	19920616

PRAI US 1992-821627 19920116

AB A controlled-release transdermal pharmaceutical contg. therapeutic agents in a poly(vinyl alc.) (I) cyrogel is disclosed. A slurry of 11.0 mg ciprofloxacin.HCl (II) and 200 mg 10% I was warmed to 50-60.degree. to obtain a clear homogeneous soln. The soln. was then placed in a mold and subjected to 6 freeze-thaw cycles to give a white opaque elastomeric cryogel having 15mm diam. and 0.5mm thickness. The release of II from the gel in 0.9% NaCl was 74% in th 1st 4 hs and it was const. in the subsequent 5-24 hs.

IT 50-81-7, Vitamin C, biological studies

51-05-8, Procaine hydrochloride 57-41-0,

Phenytoin 59-46-1, Procaine 137-58-6

, Lidocaine 4205-90-7, Clonidine

7440-66-6D, Zinc, salts

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(controlled-release transdermal pharmaceuticals contg. cryogels and)

L134 ANSWER 28 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1993:440940 HCAPLUS

DN 119:40940

TI Uses of acemannan or other aloe products in the treatment of diseases requiring intervention of the immune system for cure

IN McAnalley, Bill H.; Carpenter, Robert H.; McDaniel, Harley R.

PA Carrington Laboratories, Inc., USA

SO PCT Int. Appl., 115 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9308810	A1	19930513	WO 1991-US8204	19911105

W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR,

LK, LU, MC, MG, MW, NL, NO, PL, RO, SD, SE, SU

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE, BF, BJ, CF,

CG, CI, CM, GA, GN, ML, MR, SN, TD, TG  
 AU 9190831 A1 19930607 AU 1991-90831 19911105  
 EP 611304 A1 19940824 EP 1992-900586 19911105

R: DE, FR, GB, IT

PRAI WO 1991-US8204 19911105

AB Acemannan (I) is effective in treating a no. of conditions where the principal mechanism of resln. or cure requires intervention by the patient's immune system. I has direct stimulatory effects on the immune system. Methods for treating cancer, viral diseases, respiratory and immune regulatory diseass, inflammation, and infections and infestations by administering an acetylated mannan deriv., e.g. I derived from aloe, are described. The method finds use in tissue cultures, animals, and plants. A large variety of case studies describing the effectiveness of I in the treatment of a variety of conditions are presented.

IT 65277-42-1

RL: BIOL (Biological study)  
 (human immunodeficiency virus-assocd. fungal infection treatment with acemannan and)

L134 ANSWER 29 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1993:87649 HCAPLUS

DN 118:87649

TI Glutathione-containing immunostimulant dietary supplement

IN Khaled, F. Mahnaz

PA Life Sciences Technologies, Inc., USA

SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9221368	A1	19921210	WO 1992-US4653	19920604
	W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MG, MW, NO, PL, RO, RU, SD, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	AU 9221879	A1	19930108	AU 1992-21879	19920604
	EP 604433	A1	19940706	EP 1992-913917	19920604
	R: DE, FR, GB				

PRAI US 1991-711530 19910606

WO 1992-US4653 19920604

AB A nutrient compn. for the treatment of immune disorders comprises oxidized or nonoxidized glutathione, or its equiv., in combination with glutamine, vitamins and Se. A compn. contained glutathione 250, L-glutamine, .beta.-carotene 15, L-arginine 75, Fe 10, Mg 20, riboflavin 10, thiamine 10, vitamin A 4, vitamin B6 8, vitamin C 500, vitamin E 150, Zn 15 mg, and Cr 15, folic acid 100, Se 25, and vitamin B12 1.0 .mu.g. The compn. enhanced the in vitro survival of T4 lymphocytes (CEM cell line) infected with the human immunodeficiency virus-1, in the presence of AZT, as shown by the method of Wieslow and al. (1989). With AZT alone, cell growth inhibition was noted, thus indicating toxicity.

IT 50-81-7, Vitamin C, biological studies

7440-66-6, Zinc, biological studies

RL: BIOL (Biological study)

(nutritional supplement contg., for treatment of immune disorders)

L134 ANSWER 30 OF 33 HCAPLUS COPYRIGHT 1999 ACS

AN 1992:639842 HCPLUS  
 DN 117:239842  
 TI Transdermal compositions containing high concentration of active agents  
 IN Taylor, Reginald Morton; Wilson, David John  
 PA Commonwealth Scientific and Industrial Research Organization, Australia  
 SO PCT Int. Appl., 38 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9214442	A1	19920903	WO 1992-AU58	19920218
	W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG				
	US 5308621	A	19940503	US 1991-795499	19911121
	CA 2103725	AA	19920819	CA 1992-2103725	19920218
	AU 9212723	A1	19920915	AU 1992-12723	19920218
	AU 668679	B2	19960516		
	EP 572494	A1	19931208	EP 1992-905485	19920218
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL JP 06508100			JP 1992-504787	19920218
PRAI	AU 1991-4651		19910218		
	AU 1991-7846		19910819		
	AU 1991-7847		19910819		
	AU 1991-7848		19910819		
	US 1991-795499		19911121		
	WO 1992-AU58		19920218		

AB The title compn. comprises a biol. active agent at a concn. above its  
 solv. limit in a carrier at ambient conditions, wherein there are  
 sufficient fine particles of the agent dispersed through the carrier to  
 facilitate the transdermal transfer capacity of the compn. For example, a  
 compn. contg. ibuprofen (I), glycerol 26.2, propylene glycol 21.6, and  
 polyethylene glycol 2.5g was prep'd. The particle size of I in the compn.  
 was much smaller than that of I in a com. available cream.

IT 50-81-7, L-Ascorbic acid, biological studies

4205-90-7

RL: BIOL (Biological study)  
 (transdermal compns. contg.)

L134 ANSWER 31 OF 33 HCPLUS COPYRIGHT 1999 ACS

AN 1992:503623 HCPLUS

DN 117:103623

TI 3'-Azido-3'-deoxythymidine drug interactions. Screening for inhibitors in  
 human liver microsomes

AU Rajaonarison, Jean Francois; Lacarelle, Bruno; Catalin, Jacques; Placidi,  
 Michel; Rahmani, Roger

CS Lab. Toxicocinet. Pharmacocinet., Fac. Pharm., Marseille, 13385, Fr.

SO Drug Metab. Dispos. (1992), 20(4), 578-84

CODEN: DMDSAI; ISSN: 0090-9556

DT Journal

LA English

AB Zidovudine is a widely used antiretroviral drug active against  
 human immunodeficiency virus. The drug interactions of  
 this compd., which are primarily eliminated as a glucuronide, have not yet  
 been extensively studied. Because zidovudine is frequently  
 combined with other drugs, complete knowledge of interactions is

essential to optimize AIDS therapy. The authors therefore screened the effect of 55 mols., representative of 20 different therapeutic classes, on 3'-azido-3'-deoxythymidine (AZT) glucuronidation by human liver microsomes. Many drugs caused more than 15% inhibition of AZT glucuronidation in vitro, whereas major antibiotics (ceftazidime, isoniazid, aminoglycosides, macrolides, and sulfamides), antivirals (2',3'-dideoxycytidine, 2',3'-dideoxyinosine, and acyclovir), flucytosine, metronidazole, acetaminophen, and ranitidine had no effect. For compds. that appeared to inhibit AZT glucuronidation, extrapolation to the clin. situation must take into account both the in vitro apparent Ki values and the usual expected plasma level for the coadministered drug. By considering these parameters, this work indicates that clin. relevant inhibition for AZT glucuronidation may be obsd. with the following drugs: cefoperazone, penicillin G, amoxicillin, piperacillin, chloramphenicol, vancomycin, miconazole, rifampicin, phenobarbital, carbamazepine, **phenytoin**, valproic acid, quinidine, phenylbutazone, ketoprofen, probenecid, and propofol. Complementary clin. and pharmacokinetic studies should be performed to validate these assumptions.

IT 57-41-0, **Phenytoin**

RL: BIOL (Biological study)  
(azidodeoxythymidine glucuronidation inhibition by, in human liver microsomes)

L134 ANSWER 32 OF 33 HCPLUS COPYRIGHT 1999 ACS

AN 1990:125194 HCPLUS

DN 112:125194

TI Liposomal nucleoside analogs for treating AIDS

IN Hostetler, Karl Y.; Richman, Douglas D.

PA University of California, USA

SO PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8902733	A1	19890406	WO 1988-US3210	19880919
	W: AU, JP				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 8825261	A1	19890418	AU 1988-25261	19880919
	EP 380558	A1	19900808	EP 1988-908811	19880919
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 03501253	T2	19910322	JP 1988-508005	19880919

PRAI US 1987-99755 19870922

WO 1988-US3210 19880919

AB Phosphorylated nucleoside analogs are encapsulated in liposomes for use in treating AIDS and related retroviral infections. The nucleoside analogs are selected from the group consisting of azidothymidine, dideoxycytidine, dideoxyadenosine, and ribavirin and phosphorylated before the encapsulation to prevent leakage, resulting in reduced toxic side effects and enhanced inhibition of replication of HIV or related viruses present in monocytes and macrophages. <sup>3</sup>H-labeled AZT-5'-monophosphate (I) was encapsulated in phosphatidylcholine/cholesterol liposomes; retention rate of I was higher than that of <sup>3</sup>H-AZT. Effects of liposomes contg. I on HIV-infected MT-2 cells, U937 cells, and human macrophages are detailed.

L134 ANSWER 33 OF 33 HCPLUS COPYRIGHT 1999 ACS

AN 1985:202026 HCAPLUS  
DN 102:202026  
TI Mechanism of action of diabetogenic zinc-chelating agents.  
Model system studies  
AU Epand, R. M.; Stafford, A. R.; Tyers, M.; Nieboer, E.  
CS Dep. Biochem., McMaster Univ., Hamilton, ON, L8N 3Z5, Can.  
SO Mol. Pharmacol. (1985), 27(3), 366-74  
CODEN: MOPMA3; ISSN: 0026-895X  
DT Journal  
LA English  
AB Using model systems, the authors studied the properties of a no. of Zn-chelating agents which are known to cause diabetes in lab. animals. The abilities to permeate membranes and to complex Zn inside liposomes with the release of protons are suggested as chem. properties that can enhance diabetogenicity. When such complexing agents are added to lipid vesicles at pH 6 contg. entrapped Zn<sup>2+</sup>, they acidify the contents of these vesicles. The authors demonstrated this effect by measuring intravesicular pH both with a F-contg. F NMR probe as well as with the fluorescent probe, quinine. Using quinine, it was obsd. that 0.1 mM 8-hydroxyquinoline reduced the intravesicular pH of sonicated phospholipid vesicles contg. entrapped Zn<sup>2+</sup> (as sulfate) from pH 6.0 to 2.8. These diabetogenic chelating agents also solubilized Zn-insulin ppts. from unbuffered suspensions at pH 6.0. The solubilization results from the acidification of these suspensions. Dithizone and 8-hydroxyquinoline at 4 mM solubilized 97 and 42%, resp., of the suspended insulin. It is suggested that if such proton release occurs within the Zn-contg. insulin storage granules of pancreatic .beta.-cells, solubilization of insulin would be induced. Such an event would lead to osmotic stress and eventually to rupture of the granule. The effects of diethyldithiocarbamate (DDC), an agent that protects rabbits against the induction of diabetes by some other Zn-chelating agents, were also studied. DDC caused a decrease of 3.5 units in the intravesicular pH of Zn-contg. vesicles by a mechanism not involving the release of protons upon chelation of Zn. Several properties of DDC which may contribute to its ability to protect against the induction of diabetes were demonstrated. These include its ability to store Zn as a hydrophobic complex in membranes, its consumption of protons upon spontaneous decompn., and the ability of one of its decompn. products, diethylamine, to accelerate the dissipation of pH gradients across lipid bilayers. Diethylamine is particularly effective in stimulating a rapid dissipation of such pH gradients, even at micromolar concns. The authors attempted to est. quant. the extent of proton liberation by various Zn-chelating agents. This anal. demonstrated that partitioning of the ligand between org. and aq. phases, ligand acidity, and Zn complex stability det. the extent of proton release.  
IT 7440-66-6, biological studies  
RL: BIOL (Biological study)  
(chelating agents for, diabetes from, mechanisms in)

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DICTIONARY FILE UPDATES: 24 JUL 99 HIGHEST RN 228878-07-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 13, 1999

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conducting SmartSELECT searches.

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1 65277-42-1/BI  
(65277-42-1/RN)  
1 50-81-7/BI  
(50-81-7/RN)  
1 57-41-0/BI  
(57-41-0/RN)  
1 9068-38-6/BI  
(9068-38-6/RN)  
1 4205-90-7/BI  
(4205-90-7/RN)  
1 137-58-6/BI  
(137-58-6/RN)  
1 51-05-8/BI  
(51-05-8/RN)  
1 53-43-0/BI  
(53-43-0/RN)  
1 59-46-1/BI  
(59-46-1/RN)  
L146 10 (7440-66-6/BI OR 65277-42-1/BI OR 50-81-7/BI OR 57-41-0/BI OR  
9068-38-6/BI OR 4205-90-7/BI OR 137-58-6/BI OR 51-05-8/BI OR  
53-43-0/BI OR 59-46-1/BI)

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L146 ANSWER 1 OF 10 REGISTRY COPYRIGHT 1999 ACS  
RN 65277-42-1 REGISTRY  
CN Piperazine, 1-acetyl-4-[4-[(2R,4S)-2-(2,4-dichlorophenyl)-2-(1H-imidazol-1-ylmethyl)-1,3-dioxolan-4-yl]methoxy]phenyl]-, rel- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Piperazine, 1-acetyl-4-[4-[(2-(2,4-dichlorophenyl)-2-(1H-imidazol-1-ylmethyl)-1,3-dioxolan-4-yl]methoxy]phenyl]-, cis-

OTHER NAMES:

CN (.-.)-Ketoconazole

CN Ketoconazole

CN Nizoral

CN R 41400

FS STEREOSEARCH

DR 72093-26-6

MF C26 H28 Cl2 N4 O4

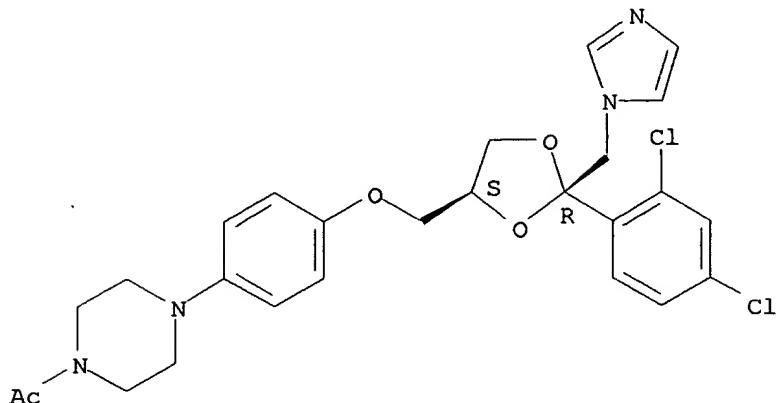
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LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAPLUS, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CIN, CSCHEM, CSNB, DDFU, DRUGPAT, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

Relative stereochemistry.



1582 REFERENCES IN FILE CA (1967 TO DATE)  
 28 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1584 REFERENCES IN FILE CPLUS (1967 TO DATE)

REFERENCE 1: 131:63203  
 REFERENCE 2: 131:55184  
 REFERENCE 3: 131:53527  
 REFERENCE 4: 131:49461  
 REFERENCE 5: 131:49197  
 REFERENCE 6: 131:29714  
 REFERENCE 7: 131:27500  
 REFERENCE 8: 131:27423  
 REFERENCE 9: 131:16303  
 REFERENCE 10: 131:13987

L146 ANSWER 2 OF 10 REGISTRY COPYRIGHT 1999 ACS  
 RN 9068-38-6 REGISTRY  
 CN Nucleotidyltransferase, deoxyribonucleate, RNA-dependent (9CI) (CA INDEX  
 NAME)  
 OTHER NAMES:  
 CN Reverse transcriptase  
 CN Revertase  
 CN RNA revertase  
 CN RNA-dependent deoxyribonucleate nucleotidyltransferase  
 CN RNA-dependent DNA polymerase  
 CN RNA-directed DNA polymerase

CN RNA-instructed DNA polymerase  
MF Unspecified  
CI MAN  
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CABAB, CAPLUS, CEN,  
CHEMCATS, CHEMLIST, CBNB, CIN, CSChem, EMBASE, IFICDB, IFIPAT, IFIUDB,  
MSDS-OHS, NAPRALERT, PIRA, PROMT, TOXLINE, TOXLIT, USPATFULL  
Other Sources: EINECS\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
5192 REFERENCES IN FILE CA (1967 TO DATE)  
59 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
5201 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 131:57512  
REFERENCE 2: 131:56719  
REFERENCE 3: 131:55747  
REFERENCE 4: 131:54755  
REFERENCE 5: 131:54734  
REFERENCE 6: 131:53641  
REFERENCE 7: 131:53624  
REFERENCE 8: 131:53618  
REFERENCE 9: 131:53584  
REFERENCE 10: 131:53571

L146 ANSWER 3 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 7440-66-6 REGISTRY

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN Asarco L 15  
CN Blue powder  
CN Ecka 4  
CN F 1000  
CN F 1000 (metal)  
CN F 1500T  
CN F 2000  
CN F 2000 (metal)  
CN LS 2  
CN LS 2 (element)  
CN LS 4  
CN LS 5  
CN LS 5 (metal)  
CN NC-Zinc  
CN Rheinzink  
CN UF  
CN UF (metal)  
CN VM 4P16  
DR 12793-53-2, 195161-85-4, 199281-21-5  
MF Zn  
CI COM

LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM\*, DDFU, DIPPR\*, DRUGU, EMBASE, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, TOXLINE, TOXLIT, TULSA, ULIDAT, USPATFULL, VETU, VTB

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Zn

181783 REFERENCES IN FILE CA (1967 TO DATE)  
9568 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
181895 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:67336

REFERENCE 2: 131:67331

REFERENCE 3: 131:67328

REFERENCE 4: 131:67280

REFERENCE 5: 131:67278

REFERENCE 6: 131:67268

REFERENCE 7: 131:67263

REFERENCE 8: 131:66996

REFERENCE 9: 131:66689

REFERENCE 10: 131:66476

L146 ANSWER 4 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 4205-90-7 REGISTRY

CN 1H-Imidazol-2-amine, N-(2,6-dichlorophenyl)-4,5-dihydro- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Imidazoline, 2-(2,6-dichloroanilino)- (7CI, 8CI)

OTHER NAMES:

CN 2-(2,6-Dichloroanilino)-2-imidazoline

CN 2-(2,6-Dichlorophenylimino)imidazolidine

CN 734571A

CN Clonidin

CN Clonidine

CN M 5041T

CN SKF 34427

FS 3D CONCORD

DR 57066-25-8, 138474-59-6

MF C9 H9 Cl2 N3

CI COM

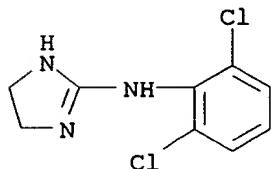
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CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM, DDFU, DRUGNL, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



5319 REFERENCES IN FILE CA (1967 TO DATE)

50 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

5320 REFERENCES IN FILE CAPLUS (1967 TO DATE)

3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:63477

REFERENCE 2: 131:53959

REFERENCE 3: 131:53947

REFERENCE 4: 131:53868

REFERENCE 5: 131:53787

REFERENCE 6: 131:40048

REFERENCE 7: 131:39641

REFERENCE 8: 131:39633

REFERENCE 9: 131:39632

REFERENCE 10: 131:39585

L146 ANSWER 5 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 137-58-6 REGISTRY

CN Acetamide, 2-(diethylamino)-N-(2,6-dimethylphenyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2',6'-Acetoxylidide, 2-(diethylamino)- (8CI)

OTHER NAMES:

CN .alpha.-Diethylamino-2,6-acetoxylidide

CN 2-(Diethylamino)-2',6'-acetoxylidide

CN Anbesol

CN Anestacon

CN Duncaine

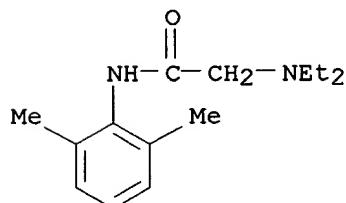
CN Isicaina

CN Isicaine

CN Leostesin

CN Lidocaine

CN Lignocaine  
 CN Maricaine  
 CN Medicaine  
 CN Remicaine  
 CN Rucaina  
 CN Solcain  
 CN Xilina  
 CN Xycaine  
 CN Xylestesin  
 CN Xylene  
 CN Xylocain  
 CN Xylocaine  
 CN Xylocitin  
 FS 3D CONCORD  
 DR 8059-42-5, 8059-66-3, 91484-71-8  
 MF C14 H22 N2 O  
 CI COM  
 LC STN Files: ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN\*,  
 BIOBUSINESS, BIOSIS, CA, CABAB, CANCERLIT, CAOLD, CAPLUS, CASREACT,  
 CHEMCATS, CHEMLIST, CBNB, CIN, CSCHM, CSNB, DDFU, DRUGU, EMBASE,  
 HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS,  
 NIOSHTIC, PIRA, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN,  
 USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



5284 REFERENCES IN FILE CA (1967 TO DATE)  
 60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5288 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 31 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:57355  
 REFERENCE 2: 131:53860  
 REFERENCE 3: 131:53599  
 REFERENCE 4: 131:49343  
 REFERENCE 5: 131:39648  
 REFERENCE 6: 131:39641  
 REFERENCE 7: 131:39571  
 REFERENCE 8: 131:39545

REFERENCE 9: 131:39442

REFERENCE 10: 131:39185

L146 ANSWER 6 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 59-46-1 REGISTRY

CN Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzoic acid, p-amino-, 2-(diethylamino)ethyl ester (8CI)

OTHER NAMES:

CN .beta.- (Diethylamino)ethyl p-aminobenzoate

CN .beta.-Diethylaminoethyl 4-aminobenzoate

CN 2-(Diethylamino)ethyl p-aminobenzoate

CN 2-Diethylaminoethyl 4-aminobenzoate

CN 4-Aminobenzoic acid 2-(diethylamino)ethyl ester

CN 4-Aminobenzoic acid diethylaminoethyl ester

CN Diethylaminoethyl p-aminobenzoate

CN Duracaine

CN Nissocaine

CN p-Aminobenzoic acid 2-diethylaminoethyl ester

CN Procain

CN Procaine

CN Procaine base

CN Spinocaine

CN Vitamin H3

FS 3D CONCORD

DR 91484-72-9

MF C13 H20 N2 O2

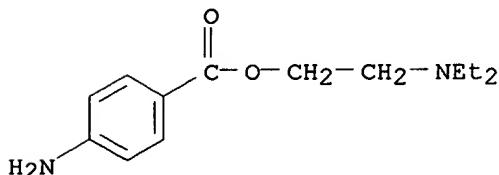
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DETHERM\*, DDFU, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NIOSHTIC, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



2149 REFERENCES IN FILE CA (1967 TO DATE)

35 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2149 REFERENCES IN FILE CAPLUS (1967 TO DATE)

58 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:28213

REFERENCE 2: 131:27803

REFERENCE 3: 131:14954

REFERENCE 4: 131:13852

REFERENCE 5: 131:13848

REFERENCE 6: 131:13766

REFERENCE 7: 130:359083

REFERENCE 8: 130:335811

REFERENCE 9: 130:332708

REFERENCE 10: 130:332707

L146 ANSWER 7 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 57-41-0 REGISTRY

CN 2,4-Imidazolidinedione, 5,5-diphenyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Hydantoin, 5,5-diphenyl- (8CI)

OTHER NAMES:

CN 5,5-Diphenyl-2,4-imidazolidinedione

CN 5,5-Diphenylhydantoin

CN Aleviatin

CN Denyl

CN Di-Hydan

CN Di-Lan

CN Dihycon

CN Dilabid

CN Dintoina

CN Diphantoin

CN Diphedan

CN Diphenylan

CN Diphenylhydantoin

CN DPH

CN Hidental

CN Lepitoin

CN Phentyoin

CN Phentyoine

CN Sodanton

CN Zentropil

FS 3D CONCORD

DR 125-59-7

MF C15 H12 N2 O2

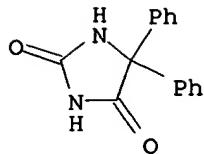
CI COM

LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PIRA, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, ULIDAT, USAN, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



5177 REFERENCES IN FILE CA (1967 TO DATE)  
 95 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5184 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:63323

REFERENCE 2: 131:58758

REFERENCE 3: 131:56155

REFERENCE 4: 131:56144

REFERENCE 5: 131:54233

REFERENCE 6: 131:53892

REFERENCE 7: 131:53545

REFERENCE 8: 131:53535

REFERENCE 9: 131:53421

REFERENCE 10: 131:39647

L146 ANSWER 8 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 53-43-0 REGISTRY

CN Androst-5-en-17-one, 3-hydroxy-, (3. $\beta$ .)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Androst-5-en-17-one, 3. $\beta$ .-hydroxy- (8CI)

OTHER NAMES:

CN 17-Chetovis

CN 17-Hormoforin

CN 3. $\beta$ .-Hydroxyandrost-5-en-17-one

CN 5,6-Dehydroisoandrosterone

CN 5,6-Didehydroisoandrosterone

CN 5-Dehydroepiandrosterone

CN Androstenolone

CN Dehydro-*epi*-androsterone

CN Dehydroepiandrosterone

CN Dehydroisoandrosterone

CN DHA

CN DHEA

CN Diandron

CN Diandrone

CN Prasterone

CN Psicosterone

CN *trans*-Dehydroandrosterone

FS STEREOSEARCH

DR 9013-35-8, 105597-37-3, 108673-53-6

MF C19 H28 O2

CI COM

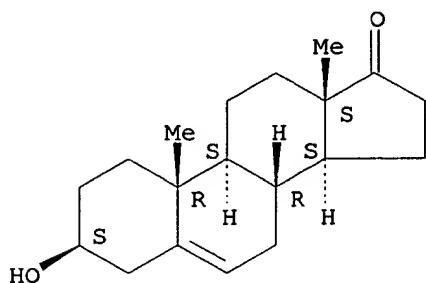
LC STN Files: ADISINSIGHT, AGRICOLA, AIDSLINE, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABAB, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CIN, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT, USAN, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



4696 REFERENCES IN FILE CA (1967 TO DATE)

92 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

4697 REFERENCES IN FILE CAPLUS (1967 TO DATE)

93 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:63203

REFERENCE 2: 131:57229

REFERENCE 3: 131:54091

REFERENCE 4: 131:49541

REFERENCE 5: 131:44196

REFERENCE 6: 131:32088

REFERENCE 7: 131:31422

REFERENCE 8: 131:31098

REFERENCE 9: 131:28114

REFERENCE 10: 131:28110

L146 ANSWER 9 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 51-05-8 REGISTRY

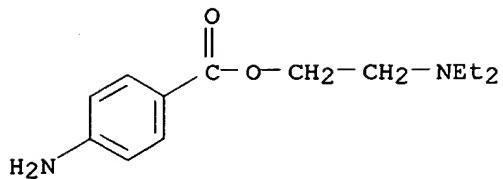
CN Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester, monohydrochloride  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Benzoic acid, p-amino-, 2-(diethylamino)ethyl ester, monohydrochloride  
(8CI)

OTHER NAMES:

CN 2-Diethylaminoethyl p-aminobenzoate hydrochloride  
CN Allocaine  
CN Aminocaine  
CN Anadolor  
CN Anesthesol  
CN Anestil  
CN Atoxicocaine  
CN Bernacaine  
CN Cetain  
CN Chlorocaine  
CN Diethylaminoethanol 4-aminobenzoate hydrochloride  
CN Ethocain  
CN Ethocaine  
CN Eugerase  
CN Geriocaine  
CN Gerovital H3  
CN Herocaine  
CN Irocaine  
CN Isocain  
CN Isocaine  
CN Isocaine-Heisler  
CN Juvocaine  
CN Kerocaine  
CN Lactocaine  
CN Naucain  
CN Naucaine  
CN Neocaine  
CN Neotonocaine  
CN Novocain  
CN Novocaine  
CN Novocaine hydrochloride  
CN Omnicain  
CN Paracain  
CN Planocaine  
CN Polocaine  
CN Procaine hydrochloride  
CN Procaine monohydrochloride  
CN Scurocaine  
CN Sevicaine  
CN Syncaine  
CN Topokain  
CN Westocaine  
DR 12663-50-2, 8023-03-8, 138481-13-7, 41585-82-4  
MF C13 H20 N2 O2 . Cl H  
CI COM  
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA,  
CAOLD, CAPIUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM,  
DETERM\*, EMBASE, GMELIN\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,  
MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, TOXLINE,  
TOXLIT, USAN, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)  
CRN (59-46-1)



## ● HCl

2243 REFERENCES IN FILE CA (1967 TO DATE)  
 17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2243 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 23 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:51393  
 REFERENCE 2: 131:39648  
 REFERENCE 3: 131:9619  
 REFERENCE 4: 130:301572  
 REFERENCE 5: 130:292512  
 REFERENCE 6: 130:245913  
 REFERENCE 7: 130:242300  
 REFERENCE 8: 130:242236  
 REFERENCE 9: 130:223871  
 REFERENCE 10: 130:223781

L146 ANSWER 10 OF 10 REGISTRY COPYRIGHT 1999 ACS

RN 50-81-7 REGISTRY

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN (+)-Ascorbic acid  
 CN 3-keto-L-Gulofuranolactone  
 CN 3-Oxo-L-gulofuranolactone  
 CN Adenex  
 CN Allercorb  
 CN Antiscorbie vitamin  
 CN Antiscorbutic vitamin  
 CN Ascoltin  
 CN Ascorbajen  
 CN Ascorbic acid  
 CN Ascorbutina  
 CN Ascorin  
 CN Ascorteal  
 CN Ascorvit  
 CN C-Quin  
 CN C-Vimin

CN Cantan  
CN Cantaxin  
CN Catavin C  
CN Ce-Mi-Lin  
CN Ce-Vi-Sol  
CN Cebicure  
CN Cebion  
CN Cebione  
CN Cecon  
CN Cegiolan  
CN Ceglion  
CN Celaskon  
CN Celin  
CN Cemagyl  
CN Cenetone  
CN Cereon  
CN Cergona  
CN Cescorbat  
CN Cetamid  
CN Cetemican  
CN Cevalin  
CN Cevatine  
CN Cevex  
CN Cevimin  
CN Cevital  
CN Cevitamic acid  
CN Cevitamin  
CN Cevitan  
CN Cevitex  
CN Chewcee  
CN Ciamin  
CN Cipca  
CN Citrovit  
CN Colascor

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
DISPLAY

FS STEREOSEARCH

DR 56533-05-2, 57304-74-2, 57606-40-3, 56172-55-5, 129940-97-2, 14536-17-5,  
50976-75-5, 89924-69-6, 30208-61-8

MF C6 H8 O6

CI COM

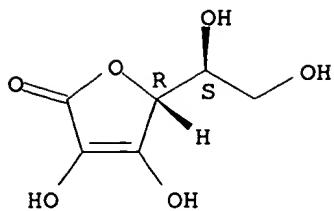
LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT,  
APIPAT2, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD,  
CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CIN,  
CSCHEM, CSNB, DETHERM\*, DDFU, DIPPR\*, DRUGU, EMBASE, GMELIN\*, HODOC\*,  
HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT,  
NIOSHTIC, PDLCOM\*, PIRA, PHAR, PROMT, RTECS\*, SPECINFO, TOXLINE, TOXLIT,  
TULSA, ULIDAT, USAN, USPATFULL, VETU, VTB

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



37531 REFERENCES IN FILE CA (1967 TO DATE)  
 898 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 37563 REFERENCES IN FILE CAPLUS (1967 TO DATE)  
 12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 131:67338  
 REFERENCE 2: 131:67290  
 REFERENCE 3: 131:67223  
 REFERENCE 4: 131:64872  
 REFERENCE 5: 131:64860  
 REFERENCE 6: 131:63564  
 REFERENCE 7: 131:63539  
 REFERENCE 8: 131:63471  
 REFERENCE 9: 131:63463  
 REFERENCE 10: 131:63317

=> fil aidsline  
 FILE 'AIDSLINE' ENTERED AT 14:11:25 ON 25 JUL 1999

FILE COVERS 1980 TO 14 JUL 1999 (19990714/ED)

AIDSLINE has been reloaded to reflect the annual MeSH changes made by the National Library of Medicine for 1999. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his 1150-

(FILE 'AIDSLINE' ENTERED AT 14:02:05 ON 25 JUL 1999)  
 L150 0 S NKC482 OR NKC 482  
 L151 63 S PMPA OR PHOSPHONOMETHOXYPROPYL ADENINE  
 L152 4 S TBD  
 L153 13292 S L147-L152  
 L154 670 S L85  
 L155 810 S PROCAINE OR ASCORBIC ACID OR VITAMINE C OR ZINC OR LIDOCAIN  
 L156 2 S HYDROXYISOVALERIC OR HYDROXY BETA METHYLBUTYRIC OR HYDROXY BE  
 L157 20 S PHOSPHATIDYL SERINES+NT/CT  
 L158 573 S KETOCONAZOLE OR PREGNENOLONE OR PHENYTOIN OR CLONIDINE OR IPR

L159 121 S L153 AND L154-L158  
L160 43 S L159 AND (COMBIN? OR SYNERG? OR FORMUL? OR COMPOSITION)  
L161 18 S DRUG THERAPY, COMBINATION/CT AND L159  
L162 25 S L160 NOT L161  
L163 5 S L162 AND SYNERG?  
L164 23 S L161,L163  
L165 20 S L162 NOT L164

FILE 'AIDSLINE' ENTERED AT 14:11:25 ON 25 JUL 1999

=> d all tot 1164

L164 ANSWER 1 OF 23 AIDSLine  
AN 1999:632 AIDSLine  
DN MED-99020568  
TI The effectiveness of combined **saquinavir** and  
**ketoconazole** treatment in reducing HIV viral load.  
AU Jordan W C  
CS Department of Internal Medicine and Family Practice, Charles R. Drew  
University of Medicine and Science, King-Drew Medical Center, Los Angeles,  
California 90059, USA.  
SO JOURNAL OF THE NATIONAL MEDICAL ASSOCIATION, (1998). Vol. 90, No. 10, pp.  
622-4.  
Journal code: J9Z. ISSN: 0027-9684.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
FS MED  
LA English  
OS MEDLINE 99020568  
EM 199901  
AB With the advent of protease inhibitors, the treatment of persons infected  
with the human immunodeficiency virus (HIV) has resulted in lower levels  
of the virus in the blood. The first of these protease inhibitors was  
**saquinavir**, which inhibits the HIV protease enzyme responsible for  
post-translational processing of Gag and Gag-Pol poly protein precursors  
into their functional products. Studies have suggested that  
**ketoconazole**, given in combination with **saquinavir**,  
increases the bioavailability of **saquinavir**. This study compared  
the HIV viral load in patients treated with **saquinavir** alone and  
in combination with **ketoconazole**. Results showed that while all  
patients who received **saquinavir** exhibited a positive response,  
patients who also received **ketoconazole** had a greater drop in  
viral load levels. In addition, a greater number of patients had  
undetectable viral levels after 3 months on the **ketoconazole/**  
**saquinavir** regimen. These results indicate that the combination of  
**saquinavir/ketoconazole** for the treatment of HIV  
requires further study.  
CT Check Tags: Human  
\*Antifungal Agents: TU, therapeutic use  
Drug Therapy, Combination  
\*HIV Infections: DT, drug therapy  
\*HIV Protease Inhibitors: TU, therapeutic use  
\*Ketoconazole: TU, therapeutic use  
\*Saquinavir: TU, therapeutic use  
\*Viral Load  
RN 127779-20-8 (Saquinavir); 65277-42-1 (Ketoconazole)  
CN 0 (Antifungal Agents); 0 (HIV Protease Inhibitors)

L164 ANSWER 2 OF 23 AIDSLine

AN 1998:14925 AIDSLINE  
DN MED-98328906  
TI **Nelfinavir**. A review of its therapeutic efficacy in HIV infection.  
AU Jarvis B; Faulds D  
CS Adis International Limited, Auckland, New Zealand. demail@adis.co.nz  
SO DRUGS, (1998). Vol. 56, No. 1, pp. 147-67.  
Journal code: EC2. ISSN: 0012-6667.  
CY New Zealand  
DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
FS MED; Priority Journals  
LA English  
OS MEDLINE 98328906  
EM 199812  
AB **Nelfinavir** is a selective inhibitor of HIV protease, the enzyme responsible for post-translational processing of HIV propeptides. In the presence of the drug, immature, noninfectious virus particles are produced. **Nelfinavir** in combination with nucleoside reverse transcriptase inhibitors (NRTIs), non-nucleoside reverse transcriptase inhibitors and/or other protease inhibitors profoundly suppresses viral replication. Plasma HIV RNA levels (viral load) rapidly fall below the limit of detection (LOD; usually 400 or 500 copies/ml in the majority of patients. When used in combination with NRTIs, **nelfinavir** 1250mg twice daily produced similar results to 3-times-daily **nelfinavir** at a range of total daily dosages. In an ongoing study > 70% of adults receiving a **nelfinavir** based combination regimen had plasma HIV RNA levels below the LOD (< 400 copies/ml) after 84 weeks. In addition, 73% of paediatric patients receiving **nelfinavir** plus at least 1 new NRTI had viral loads below the LOD (< 400 copies/ml) after 34 weeks. Furthermore, CD4+ cell counts generally increased in conjunction with reductions in viral load. Combination therapy with **nelfinavir** and **saquinavir** results in higher **saquinavir** plasma concentrations, make twice-daily administration of **saquinavir** feasible and may delay the emergence of resistant viral strains. A unique mutation at codon 30 (D30N) of the protease gene confers resistance to **nelfinavir**, but HIV with D30N mutation remains fully susceptible to **indinavir**, **ritonavir** and **saquinavir** in vitro. Nonetheless, in clinical use, significant cross-resistance is seen with all currently available protease inhibitors. Diarrhoea is the most frequently reported adverse event in patients receiving **nelfinavir**-based combination therapy and has been reported in up to 32% of **nelfinavir** recipients in randomised trials. Diarrhoea is generally of mild to moderate severity and does not result in weight loss. Rash, nausea, headache and asthenia were each reported in < or = 5% of patients. Approximately 5% of patients enrolled in an expanded access programme in the US discontinued **nelfinavir** because of adverse events. **Nelfinavir** is metabolised by the cytochrome P450 system. Several clinically significant pharmacokinetic drug interactions between **nelfinavir** and other drugs (i.e. **ketoconazole**, **rifabutin**, **rifabutin**, **rifampicin**), including other protease inhibitors (i.e. **indinavir**, **ritonavir**, **saquinavir**) have been documented. As with other available protease inhibitors, hyperglycaemia, hyperlipidaemia and abnormal fat distribution have been reported, albeit infrequently, in association with **nelfinavir**. Conclusion: **Nelfinavir**-based combination regimens are well tolerated and produce profound and prolonged suppression of HIV replication in adult and paediatric patients. Hence, **nelfinavir**

is suitable for inclusion in antiretroviral regimens for initial therapy for HIV infection and, alternatively, in regimens for patients unable to tolerate other protease inhibitors.

CT Check Tags: Human  
 Adult  
 Anti-HIV Agents: AD, administration & dosage  
 Anti-HIV Agents: PD, pharmacology  
 \*Anti-HIV Agents: TU, therapeutic use  
 Child  
 Child, Preschool  
 Drug Interactions  
 Drug Resistance, Microbial  
**Drug Therapy, Combination**  
 Drug Tolerance  
 HIV: DE, drug effects  
 \*HIV Infections: DT, drug therapy  
**Nelfinavir**: AD, administration & dosage  
**Nelfinavir**: PD, pharmacology  
 \***Nelfinavir**: TU, therapeutic use  
 RN 159989-64-7 (**Nelfinavir**)  
 CN 0 (Anti-HIV Agents)

L164 ANSWER 3 OF 23 AIDSLINE  
 AN 1998:12245 AIDSLINE  
 DN AIDS-98703570  
 TI Novel approaches for the treatment of HIV.  
 AU Arroyo H T  
 SO PWA Newsline, (1998). pp. 16-7.  
 ISSN: 1069-3637.  
 CY United States  
 DT (NEWSLETTER ARTICLE)  
 FS AIDS  
 LA English  
 EM 199809  
 AB Presentations at the Fifth Conference on Retroviruses and Opportunistic Infections focused on new and novel HIV treatments. Four new agents in advanced testing are described: **abacavir** (1592), **efavirenz** (DMP-266), **adefovir** dipivoxil (bis-POM PMEA), and **amprenavir** (141W94). Other new drugs are being developed; however, the drugs are not as far along in the testing and approval process. The new drugs include integrase inhibitors, **zinc finger** inhibitors, **cyclams** and **bycyclams**, **fusion** inhibitors, and **CKR-5** gene therapy. A summary of each drug is provided.  
 CT Adenine: AE, adverse effects  
 Adenine: TU, therapeutic use  
 Anti-HIV Agents: AE, adverse effects  
 \*Anti-HIV Agents: TU, therapeutic use  
 Dideoxynucleosides: AE, adverse effects  
 Dideoxynucleosides: TU, therapeutic use  
 Drug Resistance, Microbial  
**Drug Therapy, Combination**  
 Gene Therapy  
 Heterocyclic Compounds: TU, therapeutic use  
 \*HIV Infections: DT, drug therapy  
 HIV Integrase Inhibitors: TU, therapeutic use  
 HIV Protease Inhibitors: AE, adverse effects  
 \*HIV Protease Inhibitors: TU, therapeutic use  
 Oxazines: AE, adverse effects  
 Oxazines: TU, therapeutic use

Receptors, Chemokine: AI, antagonists & inhibitors  
Reverse Transcriptase Inhibitors: AE, adverse effects  
\*Reverse Transcriptase Inhibitors: TU, therapeutic use  
Sulfonamides: AE, adverse effects  
Sulfonamides: TU, therapeutic use  
**Zinc Fingers**

RN 154635-17-3 (L 743726); 161814-49-9 (VX 478); 73-24-5 (Adenine)  
CN 0 (Anti-HIV Agents); 0 (Heterocyclic Compounds); 0 (HIV Integrase  
Inhibitors); 0 (HIV Protease Inhibitors); 0 (Receptors, Chemokine); 0  
(Reverse Transcriptase Inhibitors); 0 (1592U89)

L164 ANSWER 4 OF 23 AIDSLINE

AN 1998:8972 AIDSLINE

DN MED-98195465

TI **saquinavir**. Clinical pharmacology and efficacy.

AU Vella S; Floridia M

CS Laboratory of Virology, Istituto Superiore di Sanit`a, Rome, Italy.

SO CLINICAL PHARMACOKINETICS, (1998). Vol. 34, No. 3, pp. 189-201.  
Journal code: DG5. ISSN: 0312-5963.

CY New Zealand

DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)

(REVIEW, TUTORIAL)

FS MED; Priority Journals

LA English

OS MEDLINE 98195465

EM 199807

AB **saquinavir** is an HIV protease inhibitor with no, or limited, effect on the activity of other structurally related human aspartic proteinases. As with other HIV protease inhibitors, **saquinavir** inhibits the cleavage of the gag-pol protein substrate leading to the release of structurally defective and functionally inactive viral particles. It is active on both HIV-1 and HIV-2, and also has activity on chronically infected cells and HIV strains resistant to reverse transcriptase inhibitors. **Synergy** of action has been observed with other antiretroviral drugs. **saquinavir** is characterised by a low bioavailability which is further reduced in the fasting state. Metabolism is mainly hepatic through cytochrome P450 (CYP) 3A4, but intestinal metabolism through the same system has also been reported. To achieve higher drug plasma concentrations and increase the antiviral effect, a new **formulation** of **saquinavir** with a higher bioavailability has recently been introduced. Higher plasma drug concentrations may also be obtained by **combining** the drug with CYP blockers, such as **ritonavir** or **ketoconazole**.

Because of its metabolic interference with the CYP system, **saquinavir** cannot be coadministered with astemizole, terfenadine or cisapride. Rifampicin (rifampin) is also contraindicated because coadministration can lead to decreases in **saquinavir** concentrations. Interactions have also been reported with other drugs metabolised through the same system, including non-nucleoside reverse transcriptase inhibitors and HIV protease inhibitors. Resistance has been observed after both in vitro and in vivo drug exposure, with a relatively specific mutation profile compared with other protease inhibitors.

**saquinavir** is generally well tolerated, with mild gastrointestinal symptoms representing the most commonly observed adverse effects. Although characterized by low bioavailability, in phase III trials **saquinavir** has been shown to have clinical efficacy in terms of survival and progression rate. As with the other protease inhibitors, **saquinavir** should be used in **combination** with other

antiretroviral drugs. Current therapeutic guidelines, however, recommend the selection of an initial treatment regimen with other protease inhibitors with higher in vivo activity in terms of RNA and CD4 response. The results of ongoing studies will clarify to what extent a new **saquinavir formulation**, recently introduced, is superior to the previous one in terms of antiviral activity and to provide comparisons with other protease inhibitors. Further studies are also needed to define the best place of **saquinavir** within treatment strategies based on protease inhibitors, particularly in respect to the optimal sequence for its use with other protease inhibitors, and the dynamics of cross-resistance and its role within regimens based on the **combination** of protease inhibitors.

CT Check Tags: Human  
 Anti-HIV Agents: PK, pharmacokinetics  
 \*Anti-HIV Agents: TU, therapeutic use  
 \*HIV Infections: DT, drug therapy  
 HIV Protease Inhibitors: PK, pharmacokinetics  
 \*HIV Protease Inhibitors: TU, therapeutic use  
**Saquinavir**: PK, pharmacokinetics  
 \***Saquinavir**: TU, therapeutic use  
 Virus Replication: DE, drug effects

RN 127779-20-8 (**Saquinavir**)  
 CN 0 (Anti-HIV Agents); 0 (HIV Protease Inhibitors)

L164 ANSWER 5 OF 23 AIDSLINE  
 AN 1998:7899 AIDSLINE  
 DN AIDS-98929345  
 TI Evidence of unique metabolic effects of protease inhibitors.  
 AU Mulligan K; Tai V W; Algren H; Chernoff D N; Lo J C; Schambelan M  
 CS University of California, San Francisco, CA.  
 SO 5th Conf Retrovir Oppor Infect, (1998). pp. 157 (Abstract No. 414).  
 CY United States  
 DT (MEETING ABSTRACTS)  
 FS AIDS  
 LA English  
 EM 199806  
 AB Anecdotal reports of changes in lipid and carbohydrate (CHO) metabolism in patients on protease inhibitors (PI) have prompted speculation that these drugs have unique metabolic effects. To determine whether there are metabolic effects that are associated only with this class of antiretrovirals (ARV), we compared results obtained in patients before and after beginning an ARV regimen that included a PI (N=16 [13M, 3F]) or lamivudine (3TC; N=8 [7M, 1F]) and in a matched control group on stable ARV other than 3TC or PI or no ARV (CNTRL; N=16 [13M, 3F]). The PI group included 12 patients on **indinavir**, 2 on **saquinavir**, and 2 on **ritonavir**, in combination with reverse transcriptase inhibitors. The mean duration of therapy at followup was 4.4 plus or minus 0.8 and 3.9 plus or minus 1.0 months in PI and 3TC, respectively. CD4+ lymphocyte count increased in PI and 3TC (+68 plus or minus 33 and +102 plus or minus 33 cells/microliter; p=0.030 and 0.009, respectively). Viral load became undetectable in 69% of patients on PI and 25% on 3TC (p=0.08). Glucose, triglyceride, and cholesterol levels increased significantly in PI (+14 plus or minus 4, +75 plus or minus 35, +51 plus or minus 10 mg/dl; p=0.03, 0.002, and less than 0.001, respectively) but not in 3TC or CNTRL. Similarly, insulin levels increased in PI (+18.6 plus or minus 9.5 micronIU/ml; p=0.07) but not in 3TC or CNTRL. Testosterone, cortisol, and DHEA sulfate levels did not change significantly in any group. Weight tended to increase in each group (+1.2 plus or minus

1.2, +0.5 plus or minus 0.8, and +0.6 plus or minus 0.9 kg in PI, 3TC, and CNTRL, respectively). There were no significant changes in total or regional fat or lean body mass (dual-energy X-ray absorptiometry) in any group over this short time period. These results suggest that protease inhibitors have unique metabolic effects that are independent of improvements in CD4 count or nutritional status. However, it is possible that more effective viral suppression with PI therapy may play a role in these changes in lipid and CHO metabolism.

CT Check Tags: Comparative Study; Female; Human; Male

\*Adipose Tissue: PA, pathology

Blood Glucose: AN, analysis

Cholesterol: BL, blood

Densitometry, X-Ray

**Drug Therapy, Combination**

HIV Infections: DT, drug therapy

\*HIV Infections: ME, metabolism

\*HIV Protease Inhibitors: AE, adverse effects

HIV Protease Inhibitors: TU, therapeutic use

Lipids: ME, metabolism

RN 57-88-5 (Cholesterol)

CN 0 (Blood Glucose); 0 (HIV Protease Inhibitors); 0 (Lipids)

L164 ANSWER 6 OF 23 AIDSLINE

AN 1998:7837 AIDSLINE

DN AIDS-98929283

TI Predictions of anti-AIDS drug-interactions using human liver microsomes.

AU Wang Y; Hickman D; Takahashi C; Ambrocio D; Unadkat J D

CS University of Washington, Seattle, WA.

SO 5th Conf Retrovir Oppor Infect, (1998). pp. 146 (Abstract No. 357).

CY United States

DT (MEETING ABSTRACTS)

FS AIDS

LA English

EM 199806

AB Aim: Multiple drug therapies for AIDS and its associated opportunistic infections have exponentially increased the numbers of possible drug interactions. Thus, as a part of an ongoing series of studies, we have examined the utility of using human liver microsomes to predict clinically relevant metabolic drug interactions. Methods: We have determined cytochrome P450 (CYP) inhibitory capacities of azithromycin (AZ), atovaquone (ATQ), clarithromycin (CLA), dapsone (DDS), ethambutol (EB), fluconazole (FLU), ketoconazole (KET), isoniazid (INH), indinavir (IND), rifabutin (RFB), rifampin (RFP), saquinavir (SAQ), sulfamethoxazole (SMX), sulfadiazine (SDZ) and zidovudine (AZT), towards CYP1A2, 2A6, 2C9, 2C19, 2D6, 2E1 and 3A4/5 activities. Results: Of the drugs examined to date, at clinical concentration only SMX (400 micrograms/ml) and SDZ (400 micrograms/ml) significantly (greater than 30%) inhibited CYP2A6 (by 36 and 78% respectively); ATQ (50 micrograms/ml) and FLU (8 micrograms/ml) inhibited CYP2C9 by 62 and 49%. IND and KET inhibited CYP3A4/5 by 41 and 50%, respectively. In addition, at ten-fold the clinical concentration, RFP (300 micrograms/ml) inhibited both 2A6 and 2D6 by 30%. INH (75 micrograms/ml) and KET (75 micrograms/ml) inhibited 2E1 and 2C9 by 52 and 63%. FLU (80 micrograms/ml) inhibited 3A4/5 activity by 55%. Based on these data, we predict that both SMX and SDZ will lead to clinically significant drug interactions when co-administrated with drugs primarily cleared by 2A6 metabolism. Likewise, ATQ and FLU will interact with drugs cleared by 2C9. IND and KET will interact with drugs which are cleared by 3A4/5. In the clinic KET and IND are potent inhibitors of metabolic

clearances of SAQ and CLA (both CYP3A4 substrates), respectively. Collectively, our data indicate that human liver microsomes are predictive of clinically significant drug interactions observed in the clinic.

CT Check Tags: Human  
 Acquired Immunodeficiency Syndrome: DT, drug therapy  
 \*Anti-HIV Agents: PK, pharmacokinetics  
 AIDS-Related Opportunistic Infections: DT, drug therapy  
 Cytochrome P-450: AI, antagonists & inhibitors  
 \*Cytochrome P-450: ME, metabolism  
 \*Drug Interactions  
 Drug Therapy, Combination  
 \*Microsomes, Liver: ME, metabolism  
 Predictive Value of Tests  
 RN 9035-51-2 (Cytochrome P-450)  
 CN 0 (Anti-HIV Agents)

L164 ANSWER 7 OF 23 AIDSLINE  
 AN 1997:21676 AIDSLINE  
 DN MED-97354392  
 TI Rifabutin absorption in the gut unaltered by concomitant administration of didanosine in AIDS patients.  
 AU Li R C; Narang P K; Sahai J; Cameron W; Bianchine J R  
 CS Department of Pharmacy, Faculty of Medicine, The Chinese University of Hong Kong, Shatin. ronli@cuhk.edu.hk  
 SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1997). Vol. 41, No. 7, pp. 1566-70.  
 Journal code: 6HK. ISSN: 0066-4804.  
 CY United States  
 DT (CLINICAL TRIAL)  
 Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 97354392  
 EM 199711  
 AB Didanosine (ddI) is currently used in the management of patients infected by the human immunodeficiency virus. Rifabutin (RBT) is being extensively used for prophylaxis against Mycobacterium avium complex (MAC) infections. Due to its acid-labile characteristics, ddI must be administered with a buffer. Recent reports have indicated that absorption of ketoconazole, ciprofloxacin, and dapsone, etc., in the gut is altered by concomitant ddI dosing. We have assessed whether concomitant dosing of ddI as antiretroviral therapy modifies RBT absorption in the gut, its steady-state pharmacokinetics, and/or safety in 15 patients with AIDS. Of the 15 patients enrolled, 12 completed the study and 3 receiving 600 mg of RBT with concomitant ddI administration withdrew prematurely from the study. Steady-state RBT pharmacokinetics were assessed on day 13 (ddI plus RBT) and day 16 (RBT alone). The ddI doses (adjusted for body weight) were 167 to 375 mg twice daily, while RBT was administered as a single 300- or 600-mg daily dose. No statistically significant ( $P > 0.05$ ) differences were seen in RBT absorption parameter estimates between days 13 and 16: maximum concentration in plasma (Cmax;  $511 \pm 341$  ng/ml versus  $525 \pm 254$  ng/ml) and the time at which Cmax was observed (3.0 versus 2.5 h). The mean RBT estimates for area under the concentration-time curve from 0 to 24 h (AUC(0- $\tau$ )) (5,650 versus 5,023 ng x h/ml) and for oral clearance (1.28 versus 1.18 liter/h/kg) on both study days were also similar. Assessment based on urinary recovery of RBT (3.1 versus 3.7 mg) and its predominant deacetyl metabolite, LM565 (1.6 versus 1.4 mg), showed no apparent effect of ddI. The fraction

of the RBT dose converted to LM565, as suggested by the ratio of AUC of the metabolite to AUC of the parent drug, was also unaltered (0.15 versus 0.12). A ratio analysis (day 13/day 16) of the RBT pharmacokinetic estimates showed that the 95% confidence intervals for all parameters were inclusive of one. Furthermore, the brief interruption of ddi therapy over this short study period at steady state produced no clinically significant changes in body weight, hematology, and renal and pancreatic functions. Therefore, concomitant administration of ddi appears not to affect RBT absorption in the gut and its disposition or safety in patients with AIDS.

CT Check Tags: Female; Human; Male  
 \*Acquired Immunodeficiency Syndrome: DT, drug therapy  
 . Acquired Immunodeficiency Syndrome: ME, metabolism  
 Adult  
 \*Anti-HIV Agents: TU, therapeutic use  
 \*Antibiotics, Antitubercular: PK, pharmacokinetics  
 \*Didanosine: TU, therapeutic use  
 Drug Interactions  
 Drug Therapy, Combination  
 \*Intestinal Absorption: PH, physiology  
 Middle Age  
 Mycobacterium avium-intracellulare Infection: PC, prevention & control  
 Rifabutin: AE, adverse effects  
 \*Rifabutin: PK, pharmacokinetics  
 RN 69655-05-6 (Didanosine); 72559-06-9 (Rifabutin)  
 CN 0 (Anti-HIV Agents); 0 (Antibiotics, Antitubercular)

L164 ANSWER 8 OF 23 AIDSLINE  
 AN 1997:15076 AIDSLINE  
 DN MED-97173271  
 TI SRR-SB3, a disulfide-containing macrolide that inhibits a late stage of the replicative cycle of human immunodeficiency virus.  
 AU Witvrouw M; Balzarini J; Pannecouque C; Jhaumeer-Laulloo S; Este J A; Schols D; Cherepanov P; Schmit J C; Debyser Z; Vandamme A M; Desmyter J; Ramadas S R; de Clercq E  
 CS Rega Institute for Medical Research, Katholieke Universiteit Leuven, Belgium.  
 SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1997). Vol. 41, No. 2, pp. 262-8.  
 Journal code: 6HK. ISSN: 0066-4804.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 97173271  
 EM 199707  
 AB From a series of macrocyclic diamides possessing the disulfide linkage, only SRR-SB3, a compound that complexes with zinc, was found to inhibit human immunodeficiency virus type 1 (HIV-1; strain IIIB) replication at a concentration of 1.8 to 6.5 micrograms/ml in MT-4, CEM, and peripheral blood mononuclear cells. SRR-SB3 was toxic to MT-4 cells at a concentration of 15.9 micrograms/ml, resulting in a selectivity index of 9 in these cells. This macrolide was also effective against various other HIV-1 strains, including clinical isolates and HIV-1 strains resistant to protease inhibitors and nucleoside and nonnucleoside reverse transcriptase inhibitors. It was also active against various HIV-2 strains, simian immunodeficiency virus (strain MAC251), and Moloney murine sarcoma virus, but not against viruses other than retroviruses. In addition, the compound was found to inhibit chronic HIV-1 infections in vitro. The compound in combination with other antiviral agents, such as

**zidovudine, zalcitabine, and stavudine, showed an effect that was between additive and synergistic.**

Time-of-addition experiments indicated that SRR-SB3 acts at a late stage of the HIV-1 replicative cycle.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't

\*Anti-HIV Agents: PD, pharmacology

\*Benzamides: PD, pharmacology

Cell Line

\*Disulfides: PD, pharmacology

Drug Synergism

DNA, Viral: AN, analysis

\*HIV-1: DE, drug effects

HIV-1: PH, physiology

Mice

Moloney Sarcoma Virus: DE, drug effects

Polymerase Chain Reaction

Retroviridae Infections: DT, drug therapy

Retroviridae Infections: VI, virology

Reverse Transcriptase Inhibitors: PD, pharmacology

Sarcoma, Experimental: DT, drug therapy

Sarcoma, Experimental: VI, virology

Tumor Virus Infections: DT, drug therapy

Tumor Virus Infections: VI, virology

\*Virus Replication: DE, drug effects

CN 0 (Anti-HIV Agents); 0 (Benzamides); 0 (Disulfides); 0 (DNA, Viral); 0 (Reverse Transcriptase Inhibitors); 0 (SRR SB3)

L164 ANSWER 9 OF 23 AIDSLINE

AN 1997:654 AIDSLINE

DN ICA11-96921420

TI The Canadian randomized open-label trial of combination therapy for MAC bacteremia: characteristics and outcome of subjects with negative blood cultures at baseline.

AU Zarowny D; Thorne A; Khorasheh S; Shafran S; Toma E; Miller M; Duperval R; Smaill F; Lemieux C; Cameron W; Schlech W; Mackie I; McFadden D; Kamal M; DiPietro N

CS Canadian HIV Trials Network, Vancouver, Canada. Fax: 604- 631 5210.

E-mail: don@hivnet.ubc.ca.

SO Int Conf AIDS, (1996). Vol. 11, No. 1, pp. 117 (Abstract No. Mo.B.1357).

CY Canada

DT (MEETING ABSTRACTS)

FS ICA11

LA English

EM 199701

AB Objective: A randomized open-label trial showed that a three drug arm of clarithromycin 1000 mg BID, rifabutin 600/300 mg QD, and ethambutol 15 mg/kg QD was associated with significantly more frequent and faster clearance of bacteremia and increased survival compared to a four drug arm (ciprofloxacin, ethambutol, rifampin, and clofazimine) in HIV+ patients with *Mycobacterium avium* complex. This subanalysis describes the characteristics and outcome of patients recruited to the trial who had negative baseline blood cultures for MAC and were not included in the primary analysis, and compares them to the cohort who were baseline positive. Methods: Eligible patients with positive blood cultures done at their local clinical facility were enrolled. Enrollment cultures were then obtained and shipped to a central laboratory for quantitative culture using BACTEC and conventional methods and speciation by DNA probe. Patients were treated and followed intensively for 16 weeks with additional blood cultures. Investigational drug treatment was available

for life. Post-study follow-up was done to obtain survival information. Descriptive statistics were used to characterize the two groups (central lab negative versus central lab positive) at randomization. Survival was compared by using the log rank test. Results: Of 229 patients randomized, 8 were ineligible or had non-MAC mycobacteremia, 34 (15%) had negative blood cultures in the specimens sent to the central lab and 187 (82%) were baseline positive. The negative and positive groups were similar in age (36.9 yrs. versus 38.2), gender (94% male), previous rifabutin prophylaxis (32% versus 23%), median CD4 count (10 cells /mm<sup>3</sup>) and median Karnofsky (70). The baseline culture negative group was heavier (mean weight 63.8 kg versus 58.8, p is less than .05), were less frequent users of ketoconazole (p less than .05) and showed trends to greater use of ddC and AZT (p=.05 and p=.07 respectively). In 32 of the 34 subjects at least one post-baseline culture was obtained. One or more of these cultures were positive for MAC in 6 of the 32. While the difference in survival was not significant (p=.27), a somewhat longer median survival was observed in the negatives (9.1 vs 6.6 months). Conclusion: There was no difference in survival between HIV+ patients with baseline negative or intermittently positive blood cultures and patients with positive baseline cultures in a prospective randomized trial of two treatment regimens for M. avium complex infection.

CT Check Tags: Female; Human; Male

Adult

Anti-Infective Agents: AD, administration & dosage

\*Anti-Infective Agents: TU, therapeutic use

Antiviral Agents: AD, administration & dosage

Antiviral Agents: TU, therapeutic use

Canada

Ciprofloxacin: AD, administration & dosage

Ciprofloxacin: TU, therapeutic use

Clofazimine: AD, administration & dosage

Clofazimine: TU, therapeutic use

**Drug Therapy, Combination**

Ethambutol: AD, administration & dosage

Ethambutol: TU, therapeutic use

HIV Infections: CO, complications

HIV Infections: DT, drug therapy

Karnofsky Performance Status

\*Mycobacterium avium Complex: IP, isolation & purification

\*Mycobacterium avium-intracellulare Infection: DT, drug therapy

Rifampin: AD, administration & dosage

Rifampin: TU, therapeutic use

Treatment Outcome

Zalcitabine: AD, administration & dosage

Zalcitabine: TU, therapeutic use

Zidovudine: AD, administration & dosage

Zidovudine: TU, therapeutic use

RN 13292-46-1 (Rifampin); 2030-63-9 (Clofazimine); 30516-87-1 (zidovudine); 74-55-5 (Ethambutol); 7481-89-2 (zalcitabine); 85721-33-1 (Ciprofloxacin)

CN 0 (Anti-Infective Agents); 0 (Antiviral Agents)

L164 ANSWER 10 OF 23 AIDSLINE

AN 1996:11946 AIDSLINE

DN MED-96330673

TI Drug interactions with antiviral drugs.

AU Taburet A M; Singlas E

CS Hopital Bicetre, Le Kremlin-Bicetre, France.

SO CLINICAL PHARMACOKINETICS, (1996). Vol. 30, No. 5, pp. 385-401.

CY Journal code: DG5. ISSN: 0312-5963.  
DT New Zealand  
Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW LITERATURE)  
FS MED; Priority Journals  
LA English  
OS MEDLINE 96330673  
EM 199612  
AB Antiviral drug interactions are a particular problem among immuno-compromised patients because these patients are often receiving multiple different drugs, i.e. antiretroviral drugs and drugs effective against herpesvirus. The combination of **zidovudine** and other antiretroviral drugs with different adverse event profiles, such as **didanosine**, **zalcitabine** and **lamivudine**, appears to be well tolerated and no relevant pharmacokinetic interactions have been detected. The adverse effects of **didanosine** and **zalcitabine** (i.e. peripheral neuropathy and pancreatitis) should be taken into account when administering these drugs with other drugs with the same tolerability profile. Coadministration of **zidovudine** and **ganciclovir** should be avoided because of the high rate of haematological intolerance. In contrast, **zidovudine** and **foscarnet** have synergistic effect and no pharmacokinetic interaction has been detected. No major change in **zidovudine** pharmacokinetics was seen when the drug was combined with **aciclovir**, **famciclovir** or **interferons**. However, concomitant use of **zidovudine** and **ribavirin** is not advised. Although no pharmacokinetic interaction was documented when **didanosine** was first administered with intravenous **ganciclovir**, recent studies have shown that concentration of **didanosine** are increased by 50% or more when coadministered with intravenous or oral **ganciclovir**. The mechanism of this interaction has not been elucidated. Lack of pharmacokinetic interaction was demonstrated between **foscarnet** and **didanosine** or **ganciclovir**. Clinical trials have shown that **zidovudine** can be administered safely with **paracetamol** (acetaminophen), nonsteroidal anti-inflammatory drugs, **oxazepam** or **codeine**. Inhibition of **zidovudine** glucuronidation has been demonstrated with **fluconazole**, **atovaquone**, **valproic acid** (**valproate sodium**), **methadone**, **probenecid** and **inosine pranobex**; however, the clinical consequences of this have not been fully investigated. No interaction has been demonstrated with **didanosine** per se but care should be taken of interaction with the high pH buffer included in the tablet formulation. Drugs that need an acidic pH for absorption (**ketoconazole**, **itraconazole** but not **fluconazole**, **dapsone**, **pyrimethamine**) or those that can be chelated by the ions of the buffer (**quinolones** and **tetracyclines**) should be administered 2 hours before or 6 hours after **didanosine**. Very few interaction studies have been undertaken with other antiviral drugs. Coadministration of **zalcitabine** with the antacid 'Maalox' results in a reduction of its absorption. **Dapsone** does not influence the disposition of **zalcitabine**. **Cotrimoxazole** (trimethoprim-sulfamethoxazole) causes an increase in **lamivudine** concentrations by 43%. **Saquinavir**, **delavirdine** and **atevirdine** appeared to be metabolised by cytochrome P450 and interactions with enzyme inducers or inhibitors could be anticipated. Some studies showed that **interferons** can reduce drug metabolism but only a few studies have evaluated the pathways involved. Further studies are required to better understand the clinical consequences of drug interactions with antiviral drugs. Drug-drug interactions should be considered in addition to individual drug clinical benefits and safety profiles.

**Analysis of Variance**

\*Antiviral Agents: TU, therapeutic use  
\*AIDS-Related Opportunistic Infections: DT, drug therapy  
AIDS-Related Opportunistic Infections: IM, immunology  
AIDS-Related Opportunistic Infections: MI, microbiology  
CD4 Lymphocyte Count

**Drug Therapy, Combination**

Severity of Illness Index  
Thymic Factor, Circulating: ME, metabolism

**Time Factors****Treatment Outcome**

\*Zidovudine: TU, therapeutic use  
Zinc: AD, administration & dosage  
Zinc: BL, blood  
\*Zinc: TU, therapeutic use

RN 30516-87-1 (Zidovudine); 7440-66-6 (Zinc); 78922-62-0  
(Thymic Factor, Circulating)

CN 0 (Antiviral Agents)

L164 ANSWER 12 OF 23 AIDSLINE

AN 1996:1992 AIDSLINE

DN MED-96008522

TI Drugs for AIDS and associated infections.

AU Anonymous

SO MEDICAL LETTER ON DRUGS AND THERAPEUTICS, (1995). Vol. 37, No. 959, pp. 87-94.

Journal code: M52. ISSN: 0025-732X.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

FS MED; Abridged Index Medicus Journals; Priority Journals

LA English

OS MEDLINE 96008522

EM 199601

CT Check Tags: Human

\*Acquired Immunodeficiency Syndrome: DT, drug therapy  
Amphotericin B: TU, therapeutic use  
Antibiotics, Antifungal: TU, therapeutic use  
Antifungal Agents: TU, therapeutic use  
Antiprotozoal Agents: TU, therapeutic use  
\*Antiviral Agents: TU, therapeutic use  
\*AIDS-Related Opportunistic Infections: DT, drug therapy  
\*Candidiasis, Oral: DT, drug therapy

Clindamycin: TU, therapeutic use

Clotrimazole: TU, therapeutic use

\*Cryptosporidiosis: DT, drug therapy

\*Cytomegalovirus Infections: DT, drug therapy

Dapsone: TU, therapeutic use

Didanosine: TU, therapeutic use

**Drug Combinations****Drug Therapy, Combination**

Fluconazole: TU, therapeutic use

Flucytosine: TU, therapeutic use

Folic Acid Antagonists: TU, therapeutic use

Foscarnet: TU, therapeutic use

Glucuronates: TU, therapeutic use

\*Herpes Simplex: DT, drug therapy

Herpes Zoster: DT, drug therapy

Isoniazid: TU, therapeutic use

Itraconazole: TU, therapeutic use

**Ketoconazole:** TU, therapeutic use  
**\*Mycobacterium avium-intracellulare Infection:** DT, drug therapy  
**Naphthoquinones:** TU, therapeutic use  
**Nystatin:** TU, therapeutic use  
**Pentamidine:** TU, therapeutic use  
**\*Pneumocystis carinii Infections:** DT, drug therapy  
**Pneumonia, Pneumocystis carinii:** DT, drug therapy  
**Prednisone:** TU, therapeutic use  
**Primaquine:** TU, therapeutic use  
**Reverse Transcriptase Inhibitors:** TU, therapeutic use  
**Stavudine:** TU, therapeutic use  
**\*Syphilis:** DT, drug therapy  
**\*Toxoplasmosis:** DT, drug therapy  
**Toxoplasmosis:** PC, prevention & control  
**Trimetrexate:** AA, analogs & derivatives  
**Trimetrexate:** TU, therapeutic use  
**\*Tuberculosis:** DT, drug therapy  
**Tuberculosis:** PC, prevention & control  
**Zalcitabine:** AA, analogs & derivatives  
**Zalcitabine:** TU, therapeutic use  
**Zidovudine:** AE, adverse effects  
**Zidovudine:** TU, therapeutic use

RN 100-33-4 (Pentamidine); 134678-17-4 (Lamivudine); 1397-89-3  
 (Amphotericin B); 1400-61-9 (Nystatin); 18323-44-9 (Clindamycin);  
 2022-85-7 (Flucytosine); 23593-75-1 (Clotrimazole); 30516-87-1 (Zidovudine); 3056-17-5 (Stavudine); 4428-95-9  
 (Foscarnet); 52128-35-5 (Trimetrexate); 53-03-2 (Prednisone); 54-85-3  
 (Isoniazid); 65277-42-1 (Ketoconazole); 69655-05-6 (Didanosine); 7481-89-2 (Zalcitabine); 80-08-0 (Dapsone);  
 82952-64-5 (trimetrexate glucuronate); 84625-61-6 (Itraconazole);  
 86386-73-4 (Fluconazole); 90-34-6 (Primaquine); 94015-53-9 (atovaquone)  
 CN 0 (Antibiotics, Antifungal); 0 (Antifungal Agents); 0 (Antiprotozoal  
 Agents); 0 (Antiviral Agents); 0 (Drug Combinations); 0 (Folic Acid  
 Antagonists); 0 (Glucuronates); 0 (Naphthoquinones); 0 (Reverse  
 Transcriptase Inhibitors)

L164 ANSWER 13 OF 23 AIDSLINE  
 AN 1995:13250 AIDSLINE  
 DN AIDS-95920108  
 TI A new class of anti-viral drugs attack highly conserved zinc  
 fingers in retroviral nucleocapsid proteins.  
 AU Henderson L E; Sowder RC I I; Kane B; Casas-Finet J R; Arthur L O; Rice W  
 G  
 CS PRI/DynCorp, NCI-FCRDC, Frederick MD.  
 SO Natl Conf Hum Retroviruses Relat Infect (2nd), (1995). pp. 68.  
 CY United States  
 DT (MEETING ABSTRACTS)  
 FS AIDS  
 LA English  
 EM 199512  
 AB All nucleocapsid (NC) proteins of the Oncovirinae and Lentivirinae  
 subfamilies of Retroviridae contain sequences of 14 amino acids with 4  
 invariant residues, Cys(X)(2)Cys(X)(4)His(X)(4)Cys, which chelate  
 zinc through histidine imidazole and cysteine thiolates. These  
 structures are referred to as retroviral CCHC zinc fingers and  
 are one of the most highly conserved features of the Retroviridae family.  
 HIV-1 NC contains two zinc fingers separated by only 7 amino  
 acids, and mutational analysis has shown that both are required for  
 packaging genomic RNA and are also essential in the infection process.

Retroviral CCHC zinc fingers are ideal targets for rational drug design because of their extreme conservation among Retroviridae and their essential roles in two steps of viral replication. A study of reactions of cysteine thiols in HIV-1NC zinc fingers reveals their susceptibility to attack by variety of electrophilic reagents including nitric oxide (NO), Cu(+2), Fe(+3), N-ethyl maleimide, 3-nitrosobenzamide, 5,5'- dithiobis(2-nitrobenzoic acid), iodoacetamide and many proprietary reagents identified through the NCI Drug Discovery Program. These reactions displace zinc, convert the thiolates to disulfides or alkylated derivatives and destroy the active conformation of the zinc fingers. Some but not all reagents are capable of reacting with the NC protein in the virus. Among the proprietary reagents are compounds that are non-toxic to cells in vitro, effective against laboratory and field isolates of HIV-1 (including monocytotropic strains and strains resistant to other drugs such as AZT, Pyridinone, Nevirapine), HIV-2 and SIV. Active compounds block assembly of new virus from infected cells, inactivate cell free virus, modify NC in the virus and show synergy in combination with AZT. Since these drugs attack highly conserved structures they may circumvent emergence of drug resistant strains.

CT Amino Acid Sequence  
 \*Antiviral Agents: PD, pharmacology  
 \*Capsid: CH, chemistry  
 Conserved Sequence  
 \*HIV-1: CH, chemistry  
 \*HIV-2: CH, chemistry  
 Molecular Sequence Data  
 \*SIV: CH, chemistry  
 \*Zinc Fingers

CN 0 (Antiviral Agents); 0 (Capsid)

L164 ANSWER 14 OF 23 AIDSLINE  
 AN 1994:11616 AIDSLINE  
 DN ICA10-94369780  
 TI DHEA: a potential treatment for HIV disease.  
 AU Hasheeve D; Salvato P; Thompson C  
 CS Houston Immuno. Institute, TX.  
 SO Int Conf AIDS, (1994). Vol. 10, No. 1, pp. 223 (Abstract No. PB0322).  
 CY Japan  
 DT (MEETING ABSTRACTS)  
 FS ICA10  
 LA English  
 EM 199412  
 AB OBJECTIVE: To evaluate the use of Dehydroepiandrosterone (DHEA), a testosterone precursor with possible immunomodulating affects, as an adjunct therapy for HIV disease. METHODS: 12 pts. with AIDS were treated with DHEA in addition to standard antiviral and prophylactic OI therapy for HIV infection. (2:CD4 < 50; 6:CD4 50-100; 4:CD4 101-200). In addition to DHEA, 4 pts. were receiving AZT/DDC, 2 were on AZT alone, 3 were on DDI alone, 1 was on AZT/DDI, and 2 were not receiving antivirals. Pts. received an average oral DHEA dosage of 75 mg qd. CD4/CD8 counts were obtained at baseline and at one month intervals. Pts. were followed from 4 to 12 months with a mean of 8 months. RESULTS: 2 pts. were deceased at the end of 12 months. 9 of the remaining 10 pts. demonstrated an increase in CD4 count. 5 of the 9 (56%) demonstrated a > 25% increase in CD4 count. 8 pts. (68%) experienced an increase in CD8 count; 2 (17%) demonstrated a > 25% increase in CD8 count. CONCLUSIONS: The majority of pts. on DHEA adjunct therapy

experienced an increase in both CD4 and CD8 counts. A > 25% increase in CD4 count is clinically significant. How this increase relates to survival is unknown. Some reports equate increase in CD8 counts with long term survival. A randomized clinical trial of this drug appears warranted.

CT Check Tags: Human  
 Acquired Immunodeficiency Syndrome: DT, drug therapy  
 \*Acquired Immunodeficiency Syndrome: TH, therapy  
 \*Adjuvants, Immunologic: TU, therapeutic use  
 Anti-Infective Agents: TU, therapeutic use  
 Antiviral Agents: TU, therapeutic use  
 Combined Modality Therapy  
 CD4-Positive T-Lymphocytes  
 Didanosine: AD, administration & dosage  
 Didanosine: TU, therapeutic use  
 Drug Evaluation  
 Drug Therapy, Combination  
 Leukocyte Count: DE, drug effects  
 \*Prasterone: TU, therapeutic use  
 Treatment Outcome  
 Zidovudine: AD, administration & dosage  
 Zidovudine: TU, therapeutic use  
 RN 30516-87-1 (Zidovudine); 53-43-0 (Prasterone);  
 69655-05-6 (Didanosine)  
 CN 0 (Adjuvants, Immunologic); 0 (Anti-Infective Agents); 0 (Antiviral Agents)

L164 ANSWER 15 OF 23 AIDSLINE  
 AN 1994:1298 AIDSLINE  
 DN MED-94043874  
 TI Pharmacokinetics of **didanosine** and **ketoconazole** after coadministration to patients seropositive for the human immunodeficiency virus.  
 AU Knupp C A; Brater D C; Relue J; Barbhaya R H  
 CS Department of Metabolism and Pharmacokinetics, Bristol-Myers Squibb Company, Syracuse, New York 13221-4755.  
 SO JOURNAL OF CLINICAL PHARMACOLOGY, (1993). Vol. 33, No. 10, pp. 912-7.  
 Journal code: HT9. ISSN: 0091-2700.  
 CY United States  
 DT (CLINICAL TRIAL)  
 Journal; Article; (JOURNAL ARTICLE)  
 (RANDOMIZED CONTROLLED TRIAL)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 94043874  
 EM 199402  
 AB The steady-state pharmacokinetics of **didanosine** (DDI) and **ketoconazole** (KET) were evaluated when the agents were administered alone or concurrently to patients seropositive for the human immunodeficiency virus. Using a randomized, three-way crossover design, multiple oral doses of DDI (375 mg twice daily for 4 days), KET (200 mg daily for 4 days) or the combination were administered under fasting conditions. When DDI and KET were coadministered, KET was given 2 hours before the morning dose of **didanosine**. Serial blood samples and total urine output were collected after the administration of a final single dose on day 5 of each treatment session. Samples were analyzed using high-pressure liquid chromatography (HPLC)/ultraviolet (UV) or fluorescence methods specific for unchanged DDI (plasma and urine) or KET (plasma only). Pharmacokinetic parameters were calculated using noncompartmental methods. The average

DDI maximum peak plasma concentration (Cmax) value at steady state was significantly less when DDI was administered with KET (1836 ng/mL) than when DDI was administered alone (2094 ng/mL), although the magnitude of the decrease was only 12%. Didanosine area under the curve (AUC(0-tau)) for the combination (2872 hr.ng/mL) was 8% less than when DDI was given alone (3107 hr.ng/mL); the difference was not significant. There were no significant differences among the other evaluated parameters (time to reach peak concentration [tmax], half-life [t1/2], renal clearance [CLR], or urinary recovery [UR]) between the two DDI treatments. There were no significant differences among any of the pharmacokinetic parameters between the two KET treatments. (ABSTRACT TRUNCATED AT 250 WORDS)

CT Check Tags: Comparative Study; Human; Male  
 Administration, Oral  
 Adult  
 Didanosine: AD, administration & dosage  
 \*Didanosine: PK, pharmacokinetics  
 Drug Therapy, Combination  
 Half-Life  
 \*HIV Seropositivity: ME, metabolism  
 Ketoconazole: AD, administration & dosage  
 \*Ketoconazole: PK, pharmacokinetics  
 Specimen Handling

RN 65277-42-1 (Ketoconazole); 69655-05-6 (Didanosine)

L164 ANSWER 16 OF 23 AIDSLINE  
 AN 1993:15211 AIDSLINE  
 DN ICA9-93334958  
 TI Aspergillus-sinusitis in AIDS with rapid invasion of the orbita and the brain.  
 AU Schnutgen M; Hohler T; Mayet W J; Meyer zum Buschenfelde K H  
 CS I. Med. Dept., Univ. of Mainz, Germany.  
 SO Int Conf AIDS, (1993). Vol. 9, No. 1, pp. 370 (Abstract No. PO-B09-1406).  
 CY GERMANY: Germany, Federal Republic of  
 DT (MEETING ABSTRACTS)  
 FS ICA9  
 LA English  
 EM 199311  
 AB INTRODUCTION: Aspergillus-infections are a rare complication in the course of the acquired immunodeficiency syndrome. Recently there has been a number of case reports describing invasive pulmonary aspergillosis as the most common organ involvement of this fungal infection. We would like to report the unusual case of an aspergillus-sinusitis complicated by orbital and intracranial invasion. CASE REPORT: A 36-year old homosexual man with AIDS was referred to our hospital because of an exophthalmus of the right eye accompanied by swelling and redness of the upper eyelid. The HIV-infection had been diagnosed in 1988. Subsequently he had suffered from cytomegalovirus-retinitis and a cerebral toxoplasmosis, for which he was treated with gancyclovir and pyrimethamine respectively. This treatment was complicated by repeated drops of neutrophil count. Because of recurrent episodes of fever due to an atypical mycobacterial infection he had received oral corticosteroids for the last year (50 mg/d). The computed tomography scan showed a mass extending from the right maxillary sinus to the right frontal sinus, invading the adjacent bones and the retroorbital space. A biopsy specimen revealed septate hyphae resembling aspergillus and necrotic tissue. Despite therapy with amphotericin B and itraconazole the patient died a few weeks later because of intracranial involvement due to the invasive aspergillosis. DISCUSSION: There have been only very few reports in the literature describing the aspergillus

infections of the sinuses and the orbita. To our knowledge this is the first case of invasive aspergillus-sinusitis demonstrating the destructive character of the disease by rapidly progressive invasion of the orbita, frontal sinus and the brain. Despite of the well known risk factors for invasive aspergillosis like neutropenia and corticosteroid use, our patient had received gancyclovir treatment for the last year. The increasing use of cytotoxic drugs like gancyclovir and AZT in the course of HIV-infections will put the patients at higher risks of fungal complications. In these cases otherwise common affections like sinusitis might be caused by pathogens like aspergillus and have a rapid and deleterious course.

CT Check Tags: Case Report; Human; Male  
 Adult  
 Amphotericin B: TU, therapeutic use  
 Antifungal Agents: TU, therapeutic use  
 Aspergillosis: CO, complications  
 Aspergillosis: DT, drug therapy  
 \*Aspergillosis: PP, physiopathology  
 AIDS-Related Opportunistic Infections: DI, diagnosis  
 AIDS-Related Opportunistic Infections: DT, drug therapy  
 \*AIDS-Related Opportunistic Infections: PP, physiopathology  
 Biopsy  
 Brain Diseases: CO, complications  
 Brain Diseases: DI, diagnosis  
 \*Brain Diseases: PP, physiopathology  
 Drug Therapy, Combination  
 Eye Infections, Fungal: CO, complications  
 Eye Infections, Fungal: DT, drug therapy  
 \*Eye Infections, Fungal: PP, physiopathology  
 Homosexuality  
 Ketoconazole: AA, analogs & derivatives  
 Ketoconazole: TU, therapeutic use  
 Sinusitis: CO, complications  
 Sinusitis: DT, drug therapy  
 Sinusitis: PP, physiopathology  
 Tomography, X-Ray Computed  
 RN 1397-89-3 (Amphotericin B); 65277-42-1 (Ketoconazole);  
 84625-61-6 (Itraconazole)  
 CN 0 (Antifungal Agents)

L164 ANSWER 17 OF 23 AIDSLINE  
 AN 1993:12523 AIDSLINE  
 DN ICA9-93335768  
 TI zinc therapy in HIV infected subjects.  
 AU Ancarani F; Vecchia S; Giacometti A; Mocchegiani E; Marcellini M; Scalise G  
 CS Inst. of Infectious Diseases, University of Ancona, Italy.  
 SO Int Conf AIDS, (1993). Vol. 9, No. 1, pp. 493 (Abstract No. PO-B28-2150).  
 CY GERMANY: Germany, Federal Republic of  
 DT (CLINICAL TRIAL)  
 (MEETING ABSTRACTS)  
 (RANDOMIZED CONTROLLED TRIAL)  
 FS ICA9  
 LA English  
 EM 199311  
 AB Seric zinc and active thymic hormone++ ++thymulin (FTS) reduction was shown in advanced HIV infection. We studied the short term effects of oral zinc administration in asymptomatic HIV infected subjects. 25 subjects with CD4 < 500/ml treated with AZT longer than 3 months, were evaluated. 15 of them were randomized to assume 200

mg/die of zinc sulphate per os for 1 month (Group A), the other 10 were considered as controls (Group B). Seric zinc and FTS were evaluated monthly for 3 times before and after randomization. RESULTS: medium seric zinc before randomization was 72.7 mcg/dl (SD +/- 14.5). Group A subjects showed a statistically significative improvement of seric zinc: 89.1 (SD +/- 21) and 88.2 (SD +/- 36.3) mcg/dl 15 and 30 days after therapy respectively. Basal seric FTS had a low saturation: 1/4.5 ratio of active/total thymulin (log -2). After 1 month of zinc therapy there was an improvement of active thymulin to 3 (log -2). Group A subjects showed also an increase of total lymphocytes. CD4 and CD8 cells. All these effects disappeared 1, 2 months after therapy discontinuation. CONCLUSIONS: asymptomatic HIV infected subjects with CD4 < 500/ml have low levels of seric zinc and active FTS. Oral administration of 200 mg/die of zinc sulphate improves these parameters, yet below physiologic levels, and mildly increases total lymphocytes and T subpopulations. Our results confirm the immunostimulant effect in T cells of oral zinc administration in HIV infected people. It seems reasonable to propose a zinc therapy for longer periods and in different doses to evaluate middle and long term effects.

CT Check Tags: Human  
 \*Adjuvants, Immunologic: TU, therapeutic use  
 Administration, Oral  
 Combined Modality Therapy  
 CD4-Positive T-Lymphocytes  
**Drug Therapy, Combination**  
 HIV Infections: BL, blood  
 HIV Infections: DT, drug therapy  
 \*HIV Infections: TH, therapy  
 Leukocyte Count  
 \*Sulfates: TU, therapeutic use  
 Thymic Factor, Circulating: DF, deficiency  
**Zidovudine**: TU, therapeutic use  
 Zinc: BL, blood  
 Zinc: DF, deficiency  
 \*Zinc: TU, therapeutic use  
 RN 30516-87-1 (**Zidovudine**); 7440-66-6 (**Zinc**); 7733-02-0 (**Zinc Sulfate**); 78922-62-0 (Thymic Factor, Circulating)  
 CN 0 (Adjuvants, Immunologic); 0 (Sulfates)

L164 ANSWER 18 OF 23 AIDSLINE  
 AN 1993:6608. AIDSLINE  
 DN MED-93216744  
 TI Antiviral phospholipids. Anti-HIV drugs conjugated to the glycerobackbone of phospholipids.  
 AU Pidgeon C; Markovich R J; Liu M D; Holzer T J; Novak R M; Keyer K A  
 CS Department of Medicinal Chemistry and Pharmacognosy, School of Pharmacy, Purdue University, West Lafayette, Indiana 47907.  
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1993). Vol. 268, No. 11, pp. 7773-8.  
 Journal code: HIV. ISSN: 0021-9258.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals; Cancer Journals  
 LA English  
 OS MEDLINE 93216744  
 EM 199307  
 AB Heteroatom fatty acid analogs of myristic acid containing oxygen or sulfur substituted for the alkyl methylene groups inhibit replication of the human immunodeficiency virus (HIV) in infected cells by acting as

alternative substrates during the viral protein myristoylation event. In this class of compounds, 12-methoxydodecanoic acid is the most potent compound but is approximately 10(3)-fold less active than azidothymidine. The antiviral activity of 12-methoxydodecanoic acid can be enhanced > 40-fold by preparing L-alpha-phosphatidylethanolamine containing 12-methoxydodecanoic acid in both alkyl chains. In addition, the diacylated L-alpha-phosphatidylcholine analog containing 12-methoxydodecanoic acid in both alkyl chains (i) has a 15-fold better antiviral selectivity, (ii) is 7-fold more potent, and (iii) is 10-100-fold more synergistic with azidothymidine than 12-methoxydodecanoic acid. Because of potent synergism, the antiviral selectivity of the diacylated L-alpha-phosphatidylcholine analog is > 10(4) when coadministered with azidothymidine. Phospholipid conjugates are chiral at the C-2 carbon of the glycerol backbone and most interesting is the observation that both the D- and L-isomers of phosphatidylcholine, phosphatidylglycerol, phosphatidic acid, and phosphatidylserine have approximately equal antiviral activity. Phospholipase A2 stereospecifically hydrolyzes only the L isomer of phospholipids and similar activity for both the D- and L- phospholipid isomers suggests that phospholipase A2 is not the rate-limiting enzyme for release of the drugs in vivo.

CT Check Tags: Comparative Study; Human  
 Antiviral Agents: BL, blood  
 Antiviral Agents: CS, chemical synthesis  
 \*Antiviral Agents: PD, pharmacology  
 Cell Line  
 Cells, Cultured  
 Drug Design  
 Drug Synergism  
 Half-Life  
 \*HIV-1: DE, drug effects  
 HIV-1: EN, enzymology  
 HIV-1: PH, physiology  
 Isomerism  
 Laurates: PD, pharmacology  
 Leukocytes, Mononuclear: EN, enzymology  
 Phospholipids: BL, blood  
 Phospholipids: CS, chemical synthesis  
 \*Phospholipids: PD, pharmacology  
 RNA-Directed DNA Polymerase: ME, metabolism  
 Structure-Activity Relationship  
 \*Virus Replication: DE, drug effects  
 Zidovudine: PD, pharmacology  
 RN 30516-87-1 (Zidovudine); 92169-28-3 (12-methoxydodecanoate)  
 CN EC 2.7.7.- (HIV-1 Reverse Transcriptase); EC 2.7.7.49 (RNA-Directed DNA Polymerase); 0 (Antiviral Agents); 0 (Laurates); 0 (Phospholipids)

L164 ANSWER 19 OF 23 AIDSLINE  
 AN 1992:15347 AIDSLINE  
 DN ICA8-92401011  
 TI Preliminary results of a broad-based primary prophylaxis phase I study in HIV-infected persons with CD4 counts less than or equal to 200/mm<sup>3</sup>.  
 AU Weiser J; Rosenstein H; Melroe H; Sullivan C; Henry K  
 CS Abbott Northwestern Hospital, Mpls, MN.  
 SO Int Conf AIDS, (1992). Vol. 8, No. 2, pp. B133 (Abstract No. PoB 3278).  
 CY Netherlands  
 DT (MEETING ABSTRACTS)  
 FS ICA8  
 LA English

EM 199212  
AB OBJECTIVES: To assess the feasibility, compliance, and safety of a combination of antimicrobial drugs for the simultaneous primary prevention of herpes group, fungal, Pneumocystis, *Mycobacterium avium-intracellulare*, and toxoplasmosis-related opportunistic infections in HIV-infected persons with CD4 less than or equal to 200/mm<sup>3</sup>. METHODS: Beginning in 8/91, 23 HIV-infected persons (all with CD4 counts less than or equal to 200; mean = 96; 18 were CDC Group III and 5 had AIDS; 22 men, 1 woman; mean age 37; anti-HIV regimen was: ZDV, 14;ddI, 1; ddC, 2; AZT/ddC, 2; 1 ddi ACTG Protocol) were enrolled in an open-label primary prophylaxis protocol and started on the following drugs: acyclovir 3200mg/day, fluconazole 100mg/day (*ketoconazole* if intolerant), ciprofloxacin 500mg/day (3 patients on rifabutin protocol 027), and TMP/SMX 1 DS/day (if intolerant then dapsone 100 mg/day or aerosolized pentamidine 300mg/4 weeks). Patients were evaluated monthly for compliance, tolerance, laboratory studies and HIV-related events. RESULTS: Twenty-one of 23 are currently active (mean time = 4.3 months, range 1-7 months). There have been two withdrawals (1 due to adverse side effects and 1 for personal/health reasons) and eight episodes of possible study drug-related adverse reactions in 5 patients (ciprofloxacin (2); T/S (3); and 3 multi-system episodes in 1 patient that could not be assigned to a single drug). Monthly laboratory studies have revealed no significant changes in hematologic, liver, or renal function. There has been one episode of an AIDS-defining OI (MAI infection). Px acceptance of the study regimen has been good. Compliance rates with the drug regimens were high based on the monthly pill counts (Acyclovir 84%, fluconazole 93%, TMP/SMX 92%, and ciprofloxacin 92%). CONCLUSIONS: With the demonstrated efficacy of prophylaxis for AIDS-related PCP, there is much interest in the development of prophylaxis for other AIDS related OIs. Many efficacy trials addressing this issue are underway. This pilot study demonstrates that the polypharmacologic regimens that are evolving can be accepted by patients with tolerable levels of adverse events and high compliance rates. Further study of our cohort and larger studies will need to address efficacy issues.

CT Check Tags: Female; Human; Male; Support, Non-U.S. Gov't  
Acyclovir: TU, therapeutic use  
Adult  
\*Anti-Infective Agents: TU, therapeutic use  
Antitubercular Agents: TU, therapeutic use  
Ciprofloxacin: TU, therapeutic use  
CD4-Positive T-Lymphocytes: IM, immunology  
Drug Evaluation  
Drug Therapy, Combination  
Fluconazole: TU, therapeutic use  
HIV Infections: CO, complications  
\*HIV Infections: DT, drug therapy  
HIV Infections: IM, immunology  
Leukocyte Count  
Opportunistic Infections: CO, complications  
Opportunistic Infections: IM, immunology  
\*Opportunistic Infections: PC, prevention & control  
Rifamycins: TU, therapeutic use  
Trimethoprim-Sulfamethoxazole Combination: TU, therapeutic use  
Zalcitabine: TU, therapeutic use  
Zidovudine: TU, therapeutic use

RN 30516-87-1 (Zidovudine); 59277-89-3 (Acyclovir); 72559-06-9 (Rifabutin); 7481-89-2 (Zalcitabine); 8064-90-2 (Trimethoprim-Sulfamethoxazole Combination); 85721-33-1 (Ciprofloxacin); 86386-73-4 (Fluconazole)

CN 0 (Anti-Infective Agents); 0 (Antitubercular Agents); 0 (Rifamycins)

L164 ANSWER 20 OF 23 AIDSLINE

AN 1991:3035 AIDSLINE

DN MED-91117576

TI Mother to child transmission of human immunodeficiency virus 1 infection despite **zidovudine** therapy from 18 weeks of gestation.

AU Barzilai A; Sperling R S; Hyatt A C; Wedgwood J F; Reidenberg B E; Hodes D S

CS Department of Pediatrics and Obstetrics, Mount Sinai School of Medicine, New York, NY 10029.

NC U01-AI-27554 (NIAID)

SO PEDIATRIC INFECTIOUS DISEASE JOURNAL, (1990). Vol. 9, No. 12, pp. 931-3. Journal code: OXJ. ISSN: 0891-3668.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

FS MED; Priority Journals

LA English

OS MEDLINE 91117576

EM 199105

CT Check Tags: Case Report; Female; Human; Support, U.S. Gov't, P.H.S.  
Acyclovir: TU, therapeutic use

Adult

\*Diseases in Twins

**Drug Therapy, Combination**

HIV Infections: DT, drug therapy

\*HIV Infections: TM, transmission

\*HIV-1

Infant, Newborn

Infant, Premature, Diseases

**Ketoconazole**: TU, therapeutic use

Patient Compliance

Pregnancy

\*Pregnancy Complications, Infectious: DT, drug therapy

\***Zidovudine**: TU, therapeutic use

RN 30516-87-1 (**Zidovudine**); 59277-89-3 (Acyclovir); 65277-42-1  
(**Ketoconazole**)

L164 ANSWER 21 OF 23 AIDSLINE

AN 1990:10300 AIDSLINE

DN ICA5-00178689

TI Retreatment of syphilis in HIV positive patients.

AU Phillip H; Harris J R; Goldmeier D

CS The Praed Street Clinic, St Mary's Hospital, London, W2 1NY, United Kingdom.

SO Int Conf AIDS, (1989). Vol. 5, pp. 361 (Abstract No. W.B.P.58).

ISBN: 0-662-56670-X.

CY Canada

DT (MEETING ABSTRACTS)

(CLINICAL TRIAL)

FS ICA5

LA English

EM 199009

AB OBJECTIVE: Treponemes can persist in the CNS following standard treatment of early syphilis with benzathine or **procaine** penicillin.

Approximately 50% of homosexuals with AIDS have had syphilis, and it is possible that persisting treponemal infection contributes to the neurological manifestations of AIDS. We are performing a trial to assess the benefits of retreatment with an antibiotic regime that achieves good

CNS penetration. METHODS: A double-blind placebo controlled trial using amoxicillin 3 g bd/probenecid 500 mg bd for HIV positive patients previously treated for syphilis. All patients have CDC stage 4 disease. They are assessed over 6 months with neuropsychiatric tests, neurological examination and serology. RESULTS: Nineteen patients have been treated so far. One withdrew due to penicillin allergy, 2 because of admission to hospital. Four patients stopped after 2 weeks because of minor reactions. Twelve completed the 3 week course. So far no significant difference between the treatment and placebo groups has emerged. CONCLUSIONS: These are small numbers of patients but the results of long term follow up will yield more information. Probenecid increases the half-life of **Zidovudine**. This has prevented use of the trial treatment in patients taking **Zidovudine**, until the safety of such a combination is assessed. The amoxicillin and probenecid regime may be useful for the initial treatment of syphilis in HIV positive patients.

CT Check Tags: Human  
 \*Amoxicillin: TU, therapeutic use  
 Clinical Trials  
 Double-Blind Method  
**Drug Therapy, Combination**  
 \*HIV Infections: CO, complications :  
 Neurosyphilis: CO, complications  
 \*Neurosyphilis: DT, drug therapy  
 Placebos  
 Probenecid: AD, administration & dosage  
 \*Probenecid: TU, therapeutic use  
**Zidovudine**: AD, administration & dosage  
 RN 26787-78-0 (Amoxicillin); 30516-87-1 (**Zidovudine**): 57-66-9  
 (Probenecid)  
 CN 0 (Placebos)

L164 ANSWER 22 OF 23 AIDSLINE  
 AN 1990:7926 AIDSLINE  
 DN ICA5-00257189  
 TI EFFICACY AND SAFETY OF KETOCONAZOLE IN HIV INFECTED INFANTS WITH mucocutaneous candidiasis.  
 AU LeMay M D; Cooper E R; Patel D K; Pelton S I  
 CS Boston City Hospital and Boston University School of Medicine, Boston, Massachusetts, USA.  
 SO Int Conf AIDS, (1989). Vol. 5, pp. 496 (Abstract No. B.591).  
 ISBN: 0-662-56670-X.  
 CY Canada  
 DT (MEETING ABSTRACTS)  
 FS ICA5  
 LA English  
 EM 199009  
 AB Mucocutaneous candidiasis is a frequent opportunistic infection in children with HIV disease and associated with significant morbidity (pain, poor feeding, failure to thrive). Recommended therapies such as Nystatin and gentian violet have not been efficacious in immunocompromised hosts with moderate to severe candidiasis. We treated 4 infants, ages 1 to 8 mos. with a **Ketoconazole** suspension (prepared by pharmacy) of 3 mg/kg q 12 h for moderate to severe thrush (3 patients) which involved buccal mucosa, tongue and palate and was associated with poor feeding and weight loss. All had failed a minimum of 7 days of Nystatin plus gentian violet. All 3 cleared on **Ketoconazole** in 3-5 days. 2/3 had recurrence when therapy was discontinued which necessitated "prophylactic" administration of 3 mg/kg/day for 3 and 10 mos. respectively. 1 patient (8 mos.) was treated for monilial dermatitis which had failed topical

therapy. The rash cleared after 10 days of treatment. All patients tolerated **Ketoconazole** well. All children had pre and post treatment evaluation of liver function. No adverse effects were observed. Specifically 1 infant (P2 F1) 4 mos. of age received **Ketoconazole** and **Zidovudine** concurrently for 3 mos. Pre therapy LFTs demonstrate moderate hepatocellular injury (SGOT 390, SGPT 149, Bili 7.3). LFTs progressively return to normal values (SGOT79, SPGT 50, Bili .7) over a 3 mos. course while on both medications. We believe **Ketoconazole** is a safe and effective therapy of mucocutaneous candidiasis. More information is needed about its concurrent use with **Zidovudine** and its use in children with evidence of hepatocellular dysfunction.

CT Check Tags: Human  
 Candidiasis, Chronic Mucocutaneous: CO, complications  
 \*Candidiasis, Chronic Mucocutaneous: DT, drug therapy  
**Drug Therapy, Combination**  
**Drug Tolerance**  
 \*HIV Infections: CO, complications  
 Infant  
**Ketoconazole: AE, adverse effects**  
 \***Ketoconazole: PD, pharmacology**  
**Ketoconazole: TU, therapeutic use**  
 Nystatin: TU, therapeutic use  
**Zidovudine: TU, therapeutic use**  
 RN 1400-61-9 (Nystatin); 30516-87-1 (**zidovudine**); 65277-42-1  
**(Ketoconazole)**

L164 ANSWER 23 OF 23 AIDSLINE  
 AN 1990:1612 AIDSLINE  
 DN MED-90085805  
 TI Inhibition of human immunodeficiency virus (HIV-1) infection by diphenylhydantoin (dilantin) implicates role of cellular calcium in virus life cycle.  
 AU Cloyd M W; Lynn W S; Ramsey K; Baron S  
 CS Department of Microbiology, University of Texas Medical Branch Galveston 77550.  
 NC AI-25722 (NIAID)  
 SO VIROLOGY, (1989). Vol. 173, No. 2, pp. 581-90.  
 Journal code: XEA. ISSN: 0042-6822.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals; Cancer Journals  
 LA English  
 OS MEDLINE 90085805  
 EM 199003  
 AB Details of the molecular interactions between human immunodeficiency virus (HIV-1) and its host cell during the infection process are not entirely clear. Building on recent reports by Lehr and Zimmer (1986, DMW 111, 1001-1002) that the membrane-reactive, anti-epileptic drug diphenylhydantoin (dilantin or **phenytoin**) (PHT) inhibited binding of HIV to lymphocytes, we hypothesized that understanding the relevant effects of this drug on cells may shed light on aspects of HIV-1 infection. We found that PHT inhibited, in a dose-dependent manner, de novo infection of various T-cell lines as well as a monocytic cell line. Moderate inhibition of HIV-1 infection was observed with drug concentrations that are therapeutic in vivo for epilepsy (approximately 20 micrograms/ml), and no concentrations used induced deleterious effects on cell growth or viability. Surprisingly, treatment of chronically infected H9 cells reduced HIV p24 expression within 1-6 weeks according to dose. This apparent induction into latency was not inhibited by cotreatment of

the chronically infected cells with 5-azacytidine, which indicated that PHT was not inducing latency by induction of methylation of the viral DNA. Flow cytometric analysis demonstrated that PHT did not significantly reduce cell-surface expression of CD4. The possibility remained that the drug inhibited HIV infection due to its known effects on calcium-dependent cellular processes. Subsequent measurements of intracellular calcium demonstrated that an increase of  $[Ca^{2+}]_i$  occurred at least 24 hr postinfection, prior to synthesis of detectable viral structural protein p24, and that this virus-induced increase in  $[Ca^{2+}]_i$  was not due to binding of HIV to the cell. This HIV-induced rise in  $[Ca^{2+}]_i$  was significantly inhibited by PHT. PHT demonstrated variable inhibitory effects on infection of normal PHA-stimulated PBLs cultured in vitro, but it was synergistic to low-dose AZT (0.01 microgram/ml) in inhibiting infection of cell lines. Because of the known inhibitory effects of PHT on calcium-dependent biochemical processes in the cell, inhibition of HIV-1 infection by PHT suggests that calcium may play a role in HIV infection and maintenance. The drug may also be a candidate therapy for individuals infected with HIV.

CT Check Tags: Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

\*Calcium: ME, metabolism

Cell Line

\*CD4-Positive T-Lymphocytes: MI, microbiology

Drug Synergism

\*HIV-1: DE, drug effects

HIV-1: PH, physiology

\*Monocytes: MI, microbiology

\*Phenytoin: PD, pharmacology

Virus Replication: DE, drug effects

Zidovudine: PD, pharmacology

RN 30516-87-1 (Zidovudine); 57-41-0 (Phenytoin);

7440-70-2 (Calcium)

=> d all tot 1165

L165 ANSWER 1 OF 20 AIDSLINE

AN 1999:3050 AIDSLINE

DN MED-99028712

TI Ritonavir. Clinical pharmacokinetics and interactions with other anti-HIV agents.

AU Hsu A; Granneman G R; Bertz R J

CS Abbott Laboratories, Abbott Park, Illinois, USA. Ann.Hsu@Abbott.com

SO CLINICAL PHARMACOKINETICS, (1998). Vol. 35, No. 4, pp. 275-91.

Journal code: DG5. ISSN: 0312-5963.

CY New Zealand

DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, TUTORIAL)

FS MED; Priority Journals

LA English

OS MEDLINE 99028712

EM 199903

AB Ritonavir is 1 of the 4 potent synthetic HIV protease inhibitors, approved by the US Food and Drug Administration (FDA) between 1995 and 1997, that have revolutionised HIV therapy. The extent of oral absorption is high and is not affected by food. Within the clinical concentration range, ritonavir is approximately 98 to 99% bound to plasma proteins, including albumin and alpha 1-acid glycoprotein. Cerebrospinal fluid (CSF) drug concentrations are low in relation to total plasma concentration. However, parallel decreases in the viral burden have

been observed in the plasma, CSF and other tissues. **Ritonavir** is primarily metabolised by cytochrome P450 (CYP) 3A isozymes and, to a lesser extent, by CYP2D6. Four major oxidative metabolites have been identified in humans, but are unlikely to contribute to the antiviral effect. About 34% and 3.5% of a 600 mg dose is excreted as unchanged drug in the faeces and urine, respectively. The clinically relevant t<sub>1/2</sub> beta is about 3 to 5 hours. Because of autoinduction, plasma concentrations generally reach steady state 2 weeks after the start of administration. The pharmacokinetics of **ritonavir** are relatively linear after multiple doses, with apparent oral clearance averaging 7 to 9 L/h. In vitro, **ritonavir** is a potent inhibitor of CYP3A. In vivo, **ritonavir** significantly increases the AUC of drugs primarily eliminated by CYP3A metabolism (e.g. clarithromycin, **ketoconazole**, rifabutin, and other HIV protease inhibitors, including **indinavir**, **saquinavir** and **nelfinavir**) with effects ranging from an increase of 77% to 20-fold in humans. It also inhibits CYP2D6-mediated metabolism, but to a significantly lesser extent (145% increase in desipramine AUC). Since **ritonavir** is also an inducer of several metabolising enzymes [CYP1A4, glucuronosyl transferase (GT), and possibly CYP2C9 and CYP2C19], the magnitude of drug interactions is difficult to predict, particularly for drugs that are metabolised by multiple enzymes or have low intrinsic clearance by CYP3A. For example, the AUC of CYP3A substrate methadone was slightly decreased and alprazolam was unaffected. **Ritonavir** is minimally affected by other CYP3A inhibitors, including **ketoconazole**. Rifampicin (rifampin), a potent CYP3A inducer, decreased the AUC of **ritonavir** by only 35%. The degree and duration of suppression of HIV replication is significantly correlated with the plasma concentrations. Thus, the large increase in the plasma concentrations of other protease inhibitors when coadministered with **ritonavir** forms the basis of rational dual protease inhibitor regimens, providing patients with 2 potent drugs at significantly reduced doses and less frequent dosage intervals.

Combination treatment of **ritonavir** with **saquinavir** and **indinavir** results in potent and sustained clinical activity. Other important factors with combination regimens include reduced interpatient variability for high clearance agents, and elimination of the food effect on the bioavailability of **indinavir**.

CT Check Tags: Animal; Human  
 Anti-HIV Agents: PD, pharmacology  
 \*Anti-HIV Agents: PK, pharmacokinetics  
 Drug Interactions  
 HIV Protease Inhibitors: PD, pharmacology  
 \*HIV Protease Inhibitors: PK, pharmacokinetics  
**Ritonavir**: PD, pharmacology  
 \***Ritonavir**: PK, pharmacokinetics

CN 0 (Anti-HIV Agents); 0 (HIV Protease Inhibitors); 0 (**Ritonavir**)

L165 ANSWER 2 OF 20 AIDSLINE  
 AN 1997:17162 AIDSLINE  
 DN MED-97253549  
 TI Determination of an in vivo metabolite of a human immunodeficiency virus protease-inhibitor in human plasma by high-performance liquid chromatography with tandem mass spectrometry.  
 AU Woolf E; Haddix H M; Matuszewski B  
 CS Merck Research Laboratories, Department of Drug Metabolism, PA 19486, USA.  
 SO JOURNAL OF CHROMATOGRAPHY. A, (1997). Vol. 762, No. 1-2, pp. 311-9.  
 Journal code: BXJ.  
 CY Netherlands

DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 97253549  
 EM 199708  
 AB A method for the determination of a metabolic of the human immunodeficiency virus protease inhibitor **indinavir**, in human plasma is described. Isolation of the analyte and the internal standard from plasma was achieved via liquid-liquid extraction with a mixture of isopropanol-chloroform (5:95, v/v). The analytes were chromatographed under reversed-phase conditions on a Waters Symmetry C<sub>18</sub> column. A Sciex API III+ tandem mass spectrometer equipped with a heated nebulizer was used as a detector and was operated in the positive ion mode. Multiple reaction monitoring using the precursor-->production combinations of m/z, 523.4-->273.4 and 512.4-->345.2 was used to quantify analyte and internal standard, respectively. The method was validated in the concentration range of 5-500 ng/ml plasma with adequate assay precision and accuracy. The assay was used to analyze samples collected during drug interaction studies of **indinavir**.  
 CT Check Tags: Comparative Study; Human  
     Antifungal Agents: AD, administration & dosage  
     Antifungal Agents: PK, pharmacokinetics  
     \*Chromatography, High Pressure Liquid: MT, methods  
     Circadian Rhythm  
     HIV Protease Inhibitors: AD, administration & dosage  
     \*HIV Protease Inhibitors: BL, blood  
     HIV Protease Inhibitors: CH, chemistry  
     HIV Protease Inhibitors: PK, pharmacokinetics  
     Indinavir: AD, administration & dosage  
     \*Indinavir: BL, blood  
     Indinavir: CH, chemistry  
     Indinavir: PK, pharmacokinetics  
     Ketoconazole: AD, administration & dosage  
     Ketoconazole: PK, pharmacokinetics  
     Linear Models  
     Reproducibility of Results  
     Sensitivity and Specificity  
     \*Spectrum Analysis, Mass: MT, methods  
 RN 150378-17-9 (**Indinavir**); 65277-42-1 (**Ketoconazole**)  
 CN 0 (Antifungal Agents); 0 (HIV Protease Inhibitors)  
  
 L165 ANSWER 3 OF 20 AIDSLINE  
 AN 1997:15473 AIDSLINE  
 DN MED-97239297  
 TI Protease inhibitors in patients with HIV disease. Clinically important pharmacokinetic considerations.  
 AU Barry M; Gibbons S; Back D; Mulcahy F  
 CS Department of Pharmacology and Therapeutics, University of Liverpool, England.  
 SO CLINICAL PHARMACOKINETICS, (1997). Vol. 32, No. 3, pp. 194-209.  
     Journal code: DG5. ISSN: 0312-5963.  
 CY New Zealand  
 DT Journal; Article; (JOURNAL ARTICLE)  
     General Review; (REVIEW)  
     (REVIEW, TUTORIAL)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 97239297  
 EM 199707

AB Since its introduction in 1987, **zidovudine** monotherapy has been the treatment of choice for patients with HIV infection. Unfortunately it has been established that the beneficial effects of **zidovudine** are not sustained due to the development of resistant viral strains. This has led to the strategy of **combination** therapy, and in 1995 treatment with **zidovudine** plus **didanosine**, or **zidovudine** plus **zalcitabine**, was demonstrated to be more effective than **zidovudine** monotherapy in preventing disease progression and reducing mortality in patients with HIV disease. Recent work demonstrates an even greater antiviral effect from triple therapy with 2 nucleosides, **zidovudine** plus **zalcitabine** with the addition of **saquinavir**, a new protease inhibitor drug. The HIV protease enzyme is responsible for the post-translational processing of gag and gag-pol polyprotein precursors, and its inhibition by drugs such as **saquinavir**, **ritonavir**, **indinavir** and **VX-478** results in the production of non-infectious virions. As resistance may also develop to the protease inhibitors they may be used in **combination**, and future strategies may well include quadruple therapy with 2 nucleoside analogues plus 2 protease inhibitors. Administration of protease inhibitors alone or in **combination** with other drugs does raise a number of important pharmacokinetic issues for patients with HIV disease. Some protease inhibitors (e.g. **saquinavir**) have kinetic profiles characterised by reduced absorption and a high first pass effect, resulting in poor bioavailability which may be improved by administrating with food. Physiological factors including achlorhydria, malabsorption and hepatic dysfunction may influence the bioavailability of protease inhibitors in HIV disease. Protease inhibitors are very highly bound to plasma proteins (> 98%), predominantly to alpha 1-acid glycoprotein. This may influence their antiviral activity in vitro and may also predispose to plasma protein displacement interactions. Such interactions are usually only of clinical relevance if the metabolism of the displaced drug is also inhibited. This is precisely the situation likely to pertain to the protease inhibitors, as **ritonavir** may displace other protease inhibitor drugs, such as **saquinavir**, from plasma proteins and inhibit their metabolism. Protease inhibitors are extensively metabolised by the cytochrome P450 (CYP) enzymes present in the liver and small intestine. In vitro studies suggest that the most influential CYP isoenzyme involved in the metabolism of the protease inhibitors is CYP3A, with the isoforms CYP2C9 and CYP2D6 also contributing. **Ritonavir** has an elimination half-life ( $t_{1/2}$  beta) of 3 hours, **indinavir** 2 hours and **saquinavir** between 7 and 12 hours. Renal elimination is not significant, with less than 5% of **ritonavir** and **saquinavir** excreted in the unchanged form. As patients with HIV disease are likely to be taking multiple prolonged drug regimens this may lead to drug interactions as a result of enzyme induction or inhibition. Recognised enzyme inducers of CYP3A, which are likely to be prescribed for patients with HIV disease, include rifampicin (rifampin) [treatment of pulmonary tuberculosis], rifabutin (treatment and prophylaxis of *Mycobacterium avium* complex), phenobarbital (phenobarbitone), **phenytoin** and carbamazepine (treatment of seizures secondary to cerebral toxoplasmosis or cerebral lymphoma). These drugs may reduce the plasma concentrations of the protease inhibitors and reduce their antiviral efficacy. If coadministered drugs are substrates for a common CYP enzyme, the elimination of one or both drugs may be impaired. Drugs which are metabolised by CYP3A and are likely to be used in the treatment of patients with HIV disease include the azole antifungals, macrolide antibiotics and dapsone; therefore, protease inhibitors may interact with these drugs. (ABSTRACT TRUNCATED)

CT Check Tags: Human  
 Anti-HIV Agents: TU, therapeutic use  
 Biological Availability  
 Blood Proteins: ME, metabolism  
 Half-Life  
 \*HIV Infections: DT, drug therapy  
 HIV Infections: ME, metabolism  
 Metabolic Clearance Rate  
 Protease Inhibitors: ME, metabolism  
 \*Protease Inhibitors: PK, pharmacokinetics  
 \*Protease Inhibitors: TU, therapeutic use  
 Zidovudine: TU, therapeutic use  
 RN 30516-87-1 (Zidovudine)  
 CN 0 (Anti-HIV Agents); 0 (Blood Proteins); 0 (Protease Inhibitors)

L165 ANSWER 4 OF 20 AIDSLINE  
 AN 1997:15293 AIDSLINE  
 DN MED-97180839  
 TI Selective biotransformation of the human immunodeficiency virus protease inhibitor **saquinavir** by human small-intestinal cytochrome P4503A4: potential contribution to high first-pass metabolism.  
 AU Fitzsimmons M E; Collins J M  
 CS Laboratory of Clinical Pharmacology, Center for Drug Evaluation and Research, U.S. Food and Drug Administration, Rockville, MD 20850, USA.  
 SO DRUG METABOLISM AND DISPOSITION, (1997). Vol. 25, No. 2, pp. 256-66.  
 Journal code: EBR. ISSN: 0090-9556.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 97180839  
 EM 199707  
 AB **Saquinavir** is a HIV protease inhibitor used in the treatment of patients with acquired immunodeficiency syndrome, but its use is limited by low oral bioavailability. The potential of human intestinal tissue to metabolize **saquinavir** was assessed in 17 different human small-intestinal microsomal preparations. **Saquinavir** was metabolized by human small-intestinal microsomes to numerous mono- and dihydroxylated species with K(M) values of 0.3-0.5 microM. The major metabolites M-2 and M-7 were single hydroxylations on the octahydro-2-(1H)-isoquinolinyl and (1,1-dimethylethyl)amino groups, respectively. **Ketoconazole** and **troleandomycin**, selective inhibitors of cytochrome P4503A4 (CYP3A4), were potent inhibitors for all oxidative metabolites of **saquinavir**. The cytochrome P450-selective inhibitors **furanylline**, **fluvoxamine**, **sulfaphenazole**, **mephenytoin**, **quinidine**, and **chlorzoxazone** had little inhibitory effect. All **saquinavir** metabolites were highly correlated with **testosterone** 6beta-hydroxylation and with each other. Human hepatic microsomes and recombinant CYP3A4 oxidized **saquinavir** to the same metabolic profile observed with human small-intestinal microsomes. **Indinavir**, a potent HIV protease inhibitor and a substrate for human hepatic CYP3A4, was a comparatively poor substrate for human intestinal microsomes and inhibited the oxidative metabolism of **saquinavir** to all metabolites with a Ki of 0.2 microM. In addition, **saquinavir** inhibited the human, small-intestinal, microsomal CYP3A4-dependent detoxication pathway of **terfenadine** to its alcohol metabolite with a Ki value of 0.7 microM. These data indicate that **saquinavir** is metabolized by human intestinal CYP3A4, that this metabolism may contribute to its poor oral bioavailability, and that

CT combination therapy with **indinavir** or other protease inhibitors may attenuate its low relative bioavailability.

Check Tags: Comparative Study; Human

\*Anti-HIV Agents: ME, metabolism

Anti-HIV Agents: PK, pharmacokinetics

Biotransformation

\*Cytochrome P-450: ME, metabolism

Drug Interactions

Histamine H1 Antagonists: ME, metabolism

\*Hydroxylases: ME, metabolism

\*HIV Protease Inhibitors: ME, metabolism

HIV Protease Inhibitors: PK, pharmacokinetics

**Indinavir**: ME, metabolism

\*Intestine, Small: EN, enzymology

**Ketoconazole**

Microsomes: EN, enzymology

Microsomes, Liver: EN, enzymology

Oxidation-Reduction

\***Saquinavir**: ME, metabolism

**Saquinavir**: PK, pharmacokinetics

Terfenadine: ME, metabolism

RN 127779-20-8 (**Saquinavir**); 150378-17-9 (**Indinavir**); 50679-08-8 (Terfenadine); 65277-42-1 (**Ketoconazole**); 9035-51-2 (Cytochrome P-450)

CN EC 1.14. (Hydroxylases); EC 1.14.99.- (nifedipine oxidase); 0 (Anti-HIV Agents); 0 (Histamine H1 Antagonists); 0 (HIV Protease Inhibitors)

L165 ANSWER 5 OF 20 AIDSLINE

AN 1996:6821 AIDSLINE

DN AIDS-96700971

TI More clinical data on protease inhibitors.

AU Smart T

SO GMHC Treat Issues, (1995). Vol. 9, No. 10, pp. 4-7.

CY United States

DT (NEWSLETTER ARTICLE)

FS AIDS

LA English

EM 199608

AB Clinical information from Abbott Laboratories, Merck, Hoffman-LaRoche, and Agouron is provided on the following protease inhibitors: **ritonavir**, **indinavir** sulfate (Crixivan), **saquinavir**, and Viracept. Overall, the research presented suggests that higher doses of these drugs, and combinations with nucleoside analogs, appear to produce more potent and durable antiviral effects than seen in earlier protease inhibitor studies. An update is included on protease inhibitor compassionate use programs on **indinavir**, **saquinavir**, and Viracept; as well as a list of protease drug interactions for **ritonavir** and **indinavir**.

CT Check Tags: Human

\*Acquired Immunodeficiency Syndrome: DT, drug therapy

Clinical Trials

CD4 Lymphocyte Count

Drug Resistance, Microbial

HIV: DE, drug effects

HIV: GE, genetics

\*HIV Infections: DT, drug therapy

HIV Protease Inhibitors: PD, pharmacology

HIV Protease Inhibitors: PK, pharmacokinetics

\*HIV Protease Inhibitors: TU, therapeutic use

Ketoconazole: ME, metabolism

Liver: ME, metabolism

Mutation

Patient Compliance

RN 65277-42-1 (Ketoconazole)

CN 0 (HIV Protease Inhibitors)

L165 ANSWER 6 OF 20 AIDSLINE

AN 1996:1636 AIDSLINE

DN MED-96142384

TI [Nonketotic hyperglycemic coma induced by somatostatin in an AIDS patient].

Coma hyperglycémique non cétosique induit par la somatostatine chez un patient atteint du SIDA.

AU Vandercam B; Hermans M P; Coumans P; Jacques D; Gala J L; Kolanowski J

CS Departement de Medecine interne, Cliniques Universitaires Saint-Luc, Bruxelles, Belgique.

SO PRESSE MEDICALE, (1995). Vol. 24, No. 30, pp. 1389-90.

Journal code: PMT. ISSN: 0755-4982.

CY France

DT Journal; Article; (JOURNAL ARTICLE)

FS MED; Priority Journals; Cancer Journals

LA French

SL English

OS MEDLINE 96142384

EM 199604

AB A 33-year-old woman with AIDS was treated with somatostatin (continuous infusion 6 mg/day) for intractable diarrhoea. Improvement was insufficient and the dose was increased to 12 mg/day 5 days later. Hyperosmolar non-ketotic coma occurred two days later (blood glucose 53 mmol/l, bicarbonate 8 mmol/l, pH of arterial blood 7.2). Search for urinary ketones was negative. Klebsiella pneumonia was isolated in the urine sample. Somatostatin was withdrawn and the patient improved with parenteral nutrition and intravenous insulin. Glucose tolerance was verified after recovery and was normal. Somatostatin is known to impair glucose tolerance and as shown in this case should also be recognized as a cause of hyperosmolar non-ketotic coma. Increasing use of somatostatin, particularly in HIV patients often given other hyperglycaemia inducing drugs such as **didanosine**, pentamidine, dapsone, and **phenytoin** should be accompanied with careful monitoring of blood glucose levels.

CT Check Tags: Case Report; Female; Human

\*Acquired Immunodeficiency Syndrome: CO, complications

Adult

Antibiotics, **Combined**: TU, therapeutic use

AIDS-Related Opportunistic Infections: DT, drug therapy

AIDS-Related Opportunistic Infections: MI, microbiology

\*Diarrhea: DT, drug therapy

Diarrhea: ET, etiology

English Abstract

Hormone Antagonists: AD, administration & dosage

\*Hormone Antagonists: AE, adverse effects

Hormone Antagonists: TU, therapeutic use

\*Hyperglycemic Hyperosmolar Nonketotic Coma: CI, chemically induced

Klebsiella Infections: CO, complications

Klebsiella Infections: DT, drug therapy

Klebsiella Infections: MI, microbiology

Somatostatin: AD, administration & dosage

\*Somatostatin: AE, adverse effects  
Somatostatin: TU, therapeutic use  
Urinary Tract Infections: CO, complications  
Urinary Tract Infections: DT, drug therapy  
Urinary Tract Infections: MI, microbiology

RN 51110-01-1 (Somatostatin)  
CN 0 (Antibiotics, Combined); 0 (Hormone Antagonists)

L165 ANSWER 7 OF 20 AIDSLINE

AN 1996:305 AIDSLINE

DN MED-96085720

TI Micronutrients and HIV-1 disease progression.

AU Baum M K; Shor-Posner G; Lu Y; Rosner B; Sauberlich H E; Fletcher M A; Szapocznik J; Eisdorfer C; Buring J E; Hennekens C H

CS Department of Epidemiology and Public Health, University of Miami School of Medicine, Florida 33101, USA.

NC 1P50MH4255 (NIMH)

KO4HL01862 (NHLBI)

SO AIDS, (1995). Vol. 9, No. 9, pp. 1051-6.

Journal code: AID. ISSN: 0269-9370.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

FS MED; Priority Journals

LA English

OS MEDLINE 96085720

EM 199604

AB OBJECTIVE: To determine whether nutritional status affects immunological markers of HIV-1 disease progression. DESIGN: A longitudinal study, to evaluate the relationship between plasma levels of nutrients and CD4 cell counts, along and in combination with beta 2-microglobulin (beta 2M; AIDS index) over an 18-month follow-up. METHODS: Biochemical measurements of nutritional status including plasma proteins, zinc, iron and vitamins B1, B2, B6, B12 (cobalamin), A, E, C and folate and immunological markers [lymphocyte subpopulations (CD4) and beta 2M] were obtained in 108 HIV-1-seropositive homosexual men at baseline and over three 6-month time periods. Changes in nutrient status (e.g., normal to deficient, deficient to normal), were compared with immunological parameters in the same time periods using an autoregressive model. RESULTS: Development of deficiency of vitamin A or vitamin B12 was associated with a decline in CD4 cell count ( $P = 0.0255$  and  $0.0377$ , respectively), while normalization of vitamin A, vitamin B12 and zinc was associated with higher CD4 cell counts ( $P = 0.0492$ ,  $0.0061$  and  $0.0112$ , respectively). These findings were largely unaffected by zidovudine use. For vitamin B12, low baseline status significantly predicted accelerated HIV-1 disease progression determined by CD4 cell count ( $P = 0.041$ ) and the AIDS index ( $P = 0.005$ ). CONCLUSIONS: These data suggest that micronutrient deficiencies are associated with HIV-1 disease progression and raise the possibility that normalization might increase symptom-free survival.

CT Check Tags: Human; Male; Support, U.S. Gov't, P.H.S.

beta 2-Microglobulin: ME, metabolism

Adult

Blood Proteins: ME, metabolism

\*CD4 Lymphocyte Count

Disease Progression

Follow-Up Studies

\*HIV Infections: IM, immunology

\*HIV-1: IM, immunology

Longitudinal Studies

Middle Age  
\*Nutritional Status  
\*Trace Elements: BL, blood  
Vitamin A Deficiency: IM, immunology  
Vitamin B 12 Deficiency: IM, immunology  
\*Vitamins: BL, blood  
Zinc: BL, blood  
Zinc: DF, deficiency  
RN 7440-66-6 (Zinc)  
CN 0 (beta 2-Microglobulin); 0 (Blood Proteins); 0 (Trace Elements); 0 (Vitamins)

L165 ANSWER 8 OF 20 AIDSLINE  
AN 1995:8721 AIDSLINE  
DN AIDS-95920017  
TI HIV-1 integrase inhibitors: discovery, structure-activity, inhibition mechanisms, selectivity.  
AU Pommier Y; Mazumder A; Kohn K W  
CS Laboratory of Molecular Pharmacology, National Cancer Institute, NIH, Bethesda, MD.  
SO NIH Conf Retroviral Integrase, (1995). pp. (Session III, speakers' Abstracts - unpaged).  
CY United States  
DT (MEETING ABSTRACTS)  
FS AIDS  
LA English  
EM 199509  
AB Several assays can be used to identify HIV-1 integrase inhibitors. We are using recombinant HIV-1 integrase and radiolabeled oligonucleotides to study various reactions of HIV-1 integrase: DNA binding, 3'-processing, strand transfer, and disintegration. The disintegration reaction offers the advantage of being catalyzed by truncated integrase lacking the N-terminus (zinc finger) and the C- terminus (DNA binding) regions. Inhibition of the truncated enzyme suggests that the drugs act with the catalytic site of HIV-1 integrase. A number of inhibitors have been discovered using in vitro assays. They belong to three main categories: DNA binders, polyhydroxylated aromatic compounds, and nucleotides. Polyhydroxylated aromatic compounds are common in various plants. Many derivatives are available as natural or synthetic compounds. We have performed structure-activity relationships with flavones, lignans, and caffeic acid phenethyl ester (CAPE) derivatives. CAPE is a main component of Propolis that bees use to reduce the size of the entrance and seal holes in their hives. Some of the synthetic derivatives are 10-fold more potent than CAPE and exhibit some activity in the anti-AIDS Screen of the National Cancer Institute. Based on drug structure and activity against the core HIV-1 integrase, we speculate that polyhydroxylated compounds and derivatives of phenanthroline cuprous complexes react with the conserved acidic amino acid that probably constitute the metal and polynucleotide binding site (DD[35]E). A variety of polyhydroxylated compounds from natural source are being investigated to discover lead structures with both anti- integrase and anti-viral activities. Nucleotides such as AZT-MP also inhibit purified HIV-1 integrase probably by binding to the polynucleotide binding site. Examples of sugar substituted nucleotides, polynucleotides and analogs with greater activity will be discussed. HIV-1 integrase inhibitors with antiviral activity are being actively searched as part of the NCI Antiviral Program and elsewhere. The combined administration of inhibitors of HIV-1 integrase, reverse transcriptase and/or protease may reduce the risk of acquired resistance during the treatment of HIV infections and AIDS.

CT      Binding Sites  
 Catalysis  
 Drug Design  
 \*DNA Nucleotidyltransferases: AI, antagonists & inhibitors  
 DNA Nucleotidyltransferases: ME, metabolism  
 DNA, Viral: ME, metabolism  
 Enzyme Inhibitors: CH, chemistry  
 \*Enzyme Inhibitors: PD, pharmacology  
 \*HIV-1: EN, enzymology  
 Nucleotides: CH, chemistry  
 Nucleotides: PD, pharmacology  
 Structure-Activity Relationship  
 CN      EC 2.7.7.- (Integrase); 0 (DNA, Viral); 0 (Enzyme Inhibitors); 0 (Nucleotides)

L165 ANSWER 9 OF 20 AIDSLINE  
 AN 1995:7441 AIDSLINE  
 DN MED-95248387  
 TI Access to therapy in the Multicenter AIDS Cohort Study, 1989-1992.  
 AU Graham N M; Jacobson L P; Kuo V; Chmiel J S; Morgenstern H; Zucconi S L  
 CS Department of Epidemiology, Johns Hopkins University, School of Hygiene  
 and Public Health, Baltimore, MD 21205, USA.  
 NC UO1-AI-35039 (NIAID)  
 UO1-AI-35040 (NIAID)  
 UO1-AI-35041 (NIAID)  
 +  
 SO JOURNAL OF CLINICAL EPIDEMIOLOGY, (1994). Vol. 47, No. 9, pp. 1003-12.  
 Journal code: JCE. ISSN: 0895-4356.  
 CY ENGLAND: United Kingdom  
 DT (CLINICAL TRIAL)  
 Journal; Article; (JOURNAL ARTICLE)  
 (MULTICENTER STUDY)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 95248387  
 EM 199508  
 AB The study aims were (i) to describe secular trends in the utilization of antiretrovirals, antivirals, *Pneumocystis carinii* pneumonia (PCP) prophylaxis, and antifungal prophylaxis and (ii) to determine whether factors such as clinical status, health services utilization, insurance status, income, education and race were associated with access to therapy. Data on utilization of therapy, health services utilization, income and insurance status were collected semiannually from October 1990 through March 1992 from 1415 homosexual/bisexual HIV-1 seropositive men in the Multicenter AIDS Cohort Study (MACS). Prevalence of therapy use according to level of immunosuppression was determined at each study visit. Clinical AIDS was defined using the 1987 CDC definition. Factors associated with use of antiretroviral therapy and PCP prophylaxis were assessed using multiple logistic regression with robust variance techniques to adjust variance estimates and significance levels for within-person correlations of drug use over time. Prevalence of *zidovudine* use remained relatively constant throughout the study period. In contrast, use of *didanosine* (21-34%), *acyclovir* (23-34%) and *dideoxycytidine* (*zalcitabine*) (8-25%) increased in participants with clinical AIDS. Similar trends were seen for **combination** antiretroviral therapy, *trimethoprim-sulfamethoxazole*, *dapsone*, *ketoconazole* and *fluconazole*. However, reported use of aerosolized *pentamidine* fell. After adjusting for CD4+ lymphocyte count and HIV-1 symptoms, previous HIV-related hospitalization (OR = 1.52; 95% CI = 1.22-1.91), outpatient

visit (OR = 2.83; 95% CI = 2.12-3.78), having insurance (OR = 1.32; 95% CI = 1.01-1.75), college education (OR = 1.42; 95% CI = 1.13-1.80) and white race (OR = 1.58; 95% CI = 1.21-2.07) were all associated with being on antiretroviral therapy in persons without clinical AIDS. In persons with clinical AIDS, having insurance (OR = 2.89; 95% CI = 1.04-8.02) and a previous outpatient visit (OR = 11.69; 95% CI = 1.77-77.30) were the significant variables. Factors significantly associated with being on PCP prophylaxis in multivariate models were previous hospitalization, previous outpatient visit, and college education (for subjects without clinical AIDS).

CT Check Tags: Human; Male; Support, U.S. Gov't, P.H.S.  
 \*Acquired Immunodeficiency Syndrome: TH, therapy  
 Adult  
 Antiviral Agents: TU, therapeutic use  
 Cohort Studies  
 \*Health Services Accessibility  
 Hospitalization: SN, statistics & numerical data  
 Income  
 Insurance, Health: UT, utilization  
 Pneumonia, *Pneumocystis carinii*: PC, prevention & control  
 Racial Stocks  
 United States  
 CN 0 (Antiviral Agents)

L165 ANSWER 10 OF 20 AIDSLINE  
 AN 1994:13201 AIDSLINE  
 DN ICA10-94371365  
 TI Cutaneous histoplasmosis and cryptococcosis in AIDS patients.  
 AU Gan A T; Gangaram H B; Suraiya H H; Ganesapillai T  
 CS Department of Dermatology, Kuala Lumpur Hospital, Malaysia.  
 SO Int Conf AIDS, (1994). Vol. 10, No. 2, pp. 184 (Abstract No. PB0751).  
 CY Japan  
 DT (MEETING ABSTRACTS)  
 FS ICA10  
 LA English  
 EM 199412  
 AB Opportunistic deep cutaneous fungal infection may occur in AIDS patients. We report a patient with cutaneous histoplasmosis and another with cutaneous cryptococcal infection. The first patient, a 32 year old man with AIDS presented with a generalised non-pruritic eruption starting as papules which later became pustules and umblicated nodules. He was on cotrimoxazole and **ketocconazole** for *pneumocystis carinii* pneumonia and oesophageal candidiasis as well as **zidovudine**. Tissue culture grew *Histoplasma* species with a positive serum *Histoplasma* antibody. His skin lesions improved with itraconazole. However he succumbed to his deteriorating general condition. The second patient, a 32 year old man with AIDS was on **zidovudine** and cotrimoxazole for *pneumocystis carinii* pneumonia. He presented with pruritic vesiculo-papular erythematous lesions on his face, neck and limbs. Culture of lesional tissue and fluid isolated *Cryptococcus neoformans*. The serum cryptococcal antigen was however negative. He improved on fluconazole after initial failure to **ketocconazole** treatment. The classical treatment for cutaneous histoplasmosis and cryptococcosis is amphotericin B and 5-flucytosine. However, because of their toxicity, newer antifungals like itraconazole and fluconazole are replacing them in the management of these fungal infections in AIDS patients.

CT Check Tags: Case Report; Human; Male  
 Acquired Immunodeficiency Syndrome: DT, drug therapy  
 Adult

\*AIDS-Related Opportunistic Infections: DI, diagnosis  
 AIDS-Related Opportunistic Infections: DT, drug therapy  
 Cryptococcosis: CO, complications  
 \*Cryptococcosis: DI, diagnosis  
 Cryptococcosis: DT, drug therapy  
 Dermatomycoses: CO, complications  
 \*Dermatomycoses: DI, diagnosis  
 Dermatomycoses: DT, drug therapy  
 Fluconazole: TU, therapeutic use  
 Histoplasmosis: CO, complications  
 \*Histoplasmosis: DI, diagnosis  
 Histoplasmosis: DT, drug therapy  
 Itraconazole: TU, therapeutic use  
 Pneumonia, Pneumocystis carinii: CO, complications  
 Pneumonia, Pneumocystis carinii: DT, drug therapy  
 Trimethoprim-Sulfamethoxazole Combination: TU, therapeutic use  
**Zidovudine**: TU, therapeutic use  
 RN 30516-87-1 (**Zidovudine**); 8064-90-2 (Trimethoprim-Sulfamethoxazole Combination); 84625-61-6 (Itraconazole); 86386-73-4 (Fluconazole)

L165 ANSWER 11 OF 20 AIDSLINE  
 AN 1994:8803 AIDSLINE  
 DN MED-94296419  
 TI Inhibition of 3'azido-3'deoxythymidine-resistant HIV-1 infection by **dehydroepiandrosterone** in vitro.  
 AU Yang J Y; Schwartz A; Henderson E E  
 CS Department of Microbiology and Immunology, Temple University School of Medicine, Philadelphia 19140.  
 NC R01 AI28761 (NIAID)  
 SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1994). Vol. 201, No. 3, pp. 1424-32.  
 Journal code: 9Y8. ISSN: 0006-291X.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals; Cancer Journals  
 LA English  
 OS MEDLINE 94296419  
 EM 199410  
 AB Human immunodeficiency virus type 1 (HIV-1) isolated from patients with acquired immunodeficiency syndrome (AIDS) shows resistance to 3'azido-3'deoxythymidine (AZT) after one or two years of treatment. AZT also has significant toxic side effects, further limiting its use in the therapy of HIV-1-infected individuals. **Dehydroepiandrosterone** (DHEA) has been shown to have a broad spectrum of biological functions, to be bioavailable orally and to be relatively nontoxic. Epidemiological studies provide evidence that reduced serum levels of DHEA are related to the progression of AIDS in HIV-1 infection. DHEA has also been shown to inhibit HIV-1 replication in vitro and block HIV-1 reactivation from chronically infected cell lines. However, there have been no reports on the ability of DHEA to inhibit the replication of AZT-resistant strains of HIV-1. We investigated whether DHEA treatment could inhibit replication of AZT-resistant strains of HIV-1. Addition of DHEA to MT-2 cell cultures infected with either AZT -sensitive or AZT-resistant isolates of HIV-1 resulted in dose-dependent inhibition of HIV-1-induced cytopathic effect and suppression of HIV-1 replication as measured by accumulation of reverse transcriptase activity. At a concentration as low as 50 microM,

DHEA reduced AZT-resistant HIV-1 replication over 50 percent as measured by cytopathic effect and accumulation of reverse transcriptase activity. This study provides evidence that DHEA can inhibit the replication of AZT-resistant as well as wild-type HIV-1. Since the main targets for DHEA are metabolic and cellular signaling pathways leading to HIV-1 replication-activation, DHEA should be effective against multidrug-resistant strains of HIV-1. Combined with recently discovered immunoregulatory properties, the finding that DHEA is able to inhibit replication of both wild-type and AZT-resistant HIV-1 suggests that in vivo DHEA may have a much broader spectrum of action than originally anticipated.

CT Check Tags: Human; In Vitro; Support, U.S. Gov't, P.H.S.  
 Cytopathogenic Effect, Viral  
 Drug Resistance, Microbial  
 \*HIV Infections: PC, prevention & control  
 \*HIV-1: DE, drug effects  
 HIV-1: GD, growth & development  
 \*Prasterone: PD, pharmacology  
 Tumor Cells, Cultured  
 Virus Replication: DE, drug effects  
 \*Zidovudine: PD, pharmacology  
 RN 30516-87-1 (Zidovudine); 53-43-0 (Prasterone)

L165 ANSWER 12 OF 20 AIDSLINE  
 AN 1994:6020 AIDSLINE  
 DN MED-94200324  
 TI Amelioration of azidothymidine-induced erythroid toxicity by hemin and stem cell factor in immune-suppressed mice.  
 AU Hamburger A W; Chen R B  
 CS University of Maryland Cancer Center/Department of Pathology, Baltimore 21201.  
 NC 1R01 HL42069-01 (NHLBI)  
 SO EXPERIMENTAL HEMATOLOGY, (1994). Vol. 22, No. 4, pp. 348-52.  
 Journal code: EPR. ISSN: 0301-472X.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals; Cancer Journals  
 LA English  
 OS MEDLINE 94200324  
 EM 199407  
 AB Recombinant cytokines such as stem cell factor (SCF) are currently being tested for the ability to ameliorate 3'azido-3'deoxythymidine (AZT)-induced anemia in AIDS patients. Recently, we showed that SCF greatly increased burst-forming units-erythroid (BFU-E) but failed to increase hematocrits of AZT-treated immune-deficient (MAIDS) mice. We reasoned that hemin, previously shown to both enhance BFU-E proliferation and accelerate erythroid maturation, might bring about differentiation of this large SCF-induced pool of BFU-E and further protect BFU-E from AZT's toxic effect. We therefore studied, in vitro, the effect of combinations of hemin and SCF on growth of BFU-E from MAIDS mice. Hemin, at concentrations of 10 to 100 microM, ameliorated the growth-inhibitory effect of AZT. 50 microM hemin increased the ED50 of AZT from  $1 \times 10^{-7}$  M to  $1.7 \times 10^{-6}$  M. SCF also ameliorated AZT-induced toxicity, but to a lesser extent. SCF and hemin increased the number of BFU-E colonies observed in the presence of AZT in an additive fashion. The resistance of BFU-E to AZT's cytotoxic effect was greater in cultures receiving hemin and SCF together than in cultures receiving SCF or hemin alone. Zinc

and tin protoporphyrins (Zn and Sn PP) increased the numbers of BFU-E observed. However, neither zinc nor tin protoporphyrins increased the ED50 of AZT. Combinations of SCF and hemin may prove useful in ameliorating AZT toxicity in both immune-suppressed mice and human immunodeficiency virus (HIV)-infected patients.

CT Check Tags: Animal; Support, U.S. Gov't, P.H.S.  
 \*Erythropoiesis: DE, drug effects  
 \*Hematopoietic Cell Growth Factors: PD, pharmacology  
 Heme: PD, pharmacology  
 \*Hemin: PD, pharmacology

Mice

Mice, Inbred C57BL

Murine Acquired Immunodeficiency Syndrome: BL, blood

Murine Acquired Immunodeficiency Syndrome: DT, drug therapy

\*Zidovudine: AI, antagonists & inhibitors

RN 14875-96-8 (Heme); 16009-13-5 (Hemin); 30516-87-1 (Zidovudine)

CN 0 (Hematopoietic Cell Growth Factors); 0 (Stem Cell Factor)

L165 ANSWER 13 OF 20 AIDSLINE

AN 1993:12581 AIDSLINE

DN ICA9-93335840

TI Relationship between steady-state plasma concentrations of atovaquone (C55) and the use of various concomitant medications in AIDS patients with *Pneumocystis carinii* pneumonia.

AU Sadler B M; Blum M R

CS Burroughs Wellcome Co. Research Triangle Park, North Carolina.

SO Int Conf AIDS, (1993). Vol. 9, No. 1, pp. 504 (Abstract No. PO-B31-2213).

CY GERMANY: Germany, Federal Republic of

DT (CLINICAL TRIAL)

(MEETING ABSTRACTS)

FS ICA9

LA English

EM 199311

AB A multivariate analysis was performed to examine the associations between C55 and the use of a variety of concomitant medications in 191 patients participating in two efficacy trials of atovaquone. While a significant association between C55 and any particular medication would not, in itself, prove that a drug interaction had taken place, the lack of an association would be strong evidence that a drug interaction had not taken place. The purpose of this analysis was to identify drugs that would not reduce the plasma concentration (and presumably the therapeutic effect) of atovaquone when given in combination. Using stepwise multiple linear regression techniques, 13 of the 24 drugs (or drug classes), zidovudine, U plasma protein binders, clofazimine, antacids, erythromycin, clotrimazole, nonsteroidal antiinflammatory agents, ketoconazole, hydroxyzine, megestrol, antiemetics, other systemic steroids, and H2 antagonists, were not associated with a significant ( $p > 0.15$ ) change in C55. However, four of these, zidovudine, erythromycin, clotazimine, and the U plasma protein binders were represented by five or fewer subjects. The expected C55 normalized for plasma albumin concentration, body weight, and no concomitant medications, was 14.8 micrograms/mL. Fluconazole and prednisone were associated with a significant increase in C55 (2.5 and 2.3 micrograms/mL, respectively). Acetaminophen, acyclovir, opiates, antidiarrheals, cephalosporins, benzodiazepines, and laxatives, were associated with significant decreases in C55  $< \text{or } = 3.4$  micrograms/mL. Metoclopramide and rifampin were associated with decreases of 7.2 and 7.8 micrograms/mL, respectively. Demographic variables for gender and race were not significant.

CT Check Tags: Female; Human; Male  
 Analgesics: PK, pharmacokinetics  
 Anti-Infective Agents: PK, pharmacokinetics  
 Anti-Inflammatory Agents, Non-Steroidal: PK, pharmacokinetics  
 Antidiarrheals: PK, pharmacokinetics  
 Antiemetics: PK, pharmacokinetics  
 \*Antifungal Agents: BL, blood  
 Antifungal Agents: PK, pharmacokinetics  
 Antifungal Agents: TU, therapeutic use  
 \*AIDS-Related Opportunistic Infections: DT, drug therapy  
 Cathartics: PK, pharmacokinetics  
 Drug Interactions  
 Histamine H2 Antagonists: PK, pharmacokinetics  
 Multivariate Analysis  
 \*Naphthoquinones: BL, blood  
 Naphthoquinones: PK, pharmacokinetics  
 Naphthoquinones: TU, therapeutic use  
 \*Pneumonia, *Pneumocystis carinii*: DT, drug therapy  
 Regression Analysis  
 Steroids: PK, pharmacokinetics  
 RN 94015-53-9 (atovaquone)  
 CN 0 (Analgesics); 0 (Anti-Infective Agents); 0 (Anti-Inflammatory Agents, Non-Steroidal); 0 (Antidiarrheals); 0 (Antiemetics); 0 (Antifungal Agents); 0 (Cathartics); 0 (Histamine H2 Antagonists); 0 (Naphthoquinones); 0 (Steroids)

L165 ANSWER 14 OF 20 AIDSLINE  
 AN 1993:388 AIDSLINE  
 DN MED-93010360  
 TI 3'-azido-3'-deoxythymidine drug interactions. Screening for inhibitors in human liver microsomes.  
 AU Rajaonarison J F; Lacarelle B; Catalin J; Placidi M; Rahmani R  
 CS Institut National de la Sante et de la Recherche Medicale, Marseille, France.  
 SO DRUG METABOLISM AND DISPOSITION, (1992). Vol. 20, No. 4, pp. 578-84.  
 Journal code: EBR. ISSN: 0090-9556.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals  
 LA English  
 OS MEDLINE 93010360  
 EM 199301  
 AB **zidovudine** is a widely used antiretroviral drug active against human immunodeficiency virus. The drug interactions of this compound, which are primarily eliminated as a glucuronide, have not yet been extensively studied. Because **zidovudine** is frequently combined with other drugs, complete knowledge of interactions is essential to optimize AIDS therapy. We therefore screened the effect of 55 molecules, representative of 20 different therapeutic classes, on 3'-azido-3'-deoxythymidine (**AZT**) glucuronidation by human liver microsomes. We demonstrate that many drugs caused more than 15% inhibition of **AZT** glucuronidation in vitro, whereas major antibiotics (ceftazidime, isoniazid, aminoglycosides, macrolides, and sulfamides), antivirals (2',3'-dideoxycytidine, 2',3'-dideoxyinosine, and acyclovir), flucytosine, metronidazole, acetaminophen, and ranitidine had no effect. For compounds that appeared to inhibit **AZT** glucuronidation, extrapolation to the clinical situation must take into account both the in vitro apparent Ki values and the usual expected plasma level for the coadministered drug. By considering these parameters, this work indicates

that clinically relevant inhibition of AZT glucuronidation may be observed with the following drugs: cefoperazone, penicillin G, amoxicillin, piperacillin, chloramphenicol, vancomycin, miconazole, rifampicin, phenobarbital, carbamazepine, phenytoin, valproic acid, quinidine, phenylbutazone, ketoprofen, probenecid, and propofol. Complementary clinical and pharmacokinetic studies should be performed to validate these assumptions.

CT Check Tags: Human; In Vitro  
 Drug Interactions  
 Kinetics  
 \*Microsomes, Liver: ME, metabolism  
 \*Zidovudine: AA, analogs & derivatives  
 \*Zidovudine: ME, metabolism

RN 117675-21-5 (3'-azido-3'-deoxy-5'-O-beta-glucopyranuronosylthymidine);  
 30516-87-1 (Zidovudine)

L165 ANSWER 15 OF 20 AIDSLINE  
 AN 1992:16879 AIDSLINE  
 DN MED-92321680  
 TI Chemotherapy of murine colorectal carcinoma with cisplatin and cisplatin plus 3'-deoxy-3'-azidothymidine.  
 AU Klann R C; Holbrook C T; Nyce J W  
 CS Department of Pediatric Hematology, School of Medicine, East Carolina University, Greenville, NC 27858-4354.  
 SO ANTICANCER RESEARCH, (1992). Vol. 12, No. 3, pp. 781-7.  
 Journal code: 59L. ISSN: 0250-7005.  
 CY Greece  
 DT Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Priority Journals; Cancer Journals  
 LA English  
 OS MEDLINE 92321680  
 EM 199210  
 AB In light of the discouraging results obtained with conventional chemotherapy of human colon cancer using 5-fluorouracil, we examined the effects of cis-diamminedichloroplatinum (cisplatin) alone and combined with 3'-deoxy-3'-azidothymidine (AZT) on chemotherapy of colorectal adenocarcinomas induced by dimethylhydrazine in CD-1 mice. Thirteen weeks after a 20 week tumor induction period (15 mg/kg dimethylhydrazine weekly) groups of 19 mice were given either no therapy, or weekly cisplatin (6 mg/kg for 4 wks), AZT (400 mg/kg, wks 3 and 4), or cisplatin and AZT. Animals were autopsied at death or after euthanasia on day 99 post initiation of therapy, their colons excised, fixed in buffered formalin and the number and volume of tumors measured. Cisplatin alone or with AZT decreased tumor size by 47-52%, and enhanced survival, leaving 55% of the mice alive at day 99 compared to 18% in controls. These therapeutic effects were amplified when animals were given chemotherapy during recovery from the effects of short-term dietary provision of the anti-carcinogenic steroid, dehydroepiandrosterone (DHEA). Our results suggest cisplatin is an effective chemotherapeutic agent against colon cancer in this murine model, and warrant further studies of its interaction with AZT and DHEA in enhancing this effect.

CT Check Tags: Animal; Female; Male  
 Antineoplastic Agents: AD, administration & dosage  
 \*Antineoplastic Agents: TU, therapeutic use  
 \*Antineoplastic Agents, Combined: TU, therapeutic use  
 Cisplatin: AD, administration & dosage  
 \*Cisplatin: TU, therapeutic use  
 Colonic Neoplasms: CI, chemically induced

\*Colonic Neoplasms: DT, drug therapy

Dimethylhydrazines

Mice

Mice, Inbred Strains

\*Prasterone: TU, therapeutic use

Zidovudine: AD, administration & dosage

\*Zidovudine: TU, therapeutic use

RN 15663-27-1 (Cisplatin); 30516-87-1 (Zidovudine); 53-43-0

(Prasterone)

CN 0 (Antineoplastic Agents); 0 (Antineoplastic Agents, Combined);  
0 (Dimethylhydrazines)

L165 ANSWER 16 OF 20 AIDSLINE

AN 1992:15486 AIDSLINE

DN ICA8-92403652

TI An unusual isolated kidney localization of invasive Aspergillosis in an AIDS.

AU Weiss L; Piketty C; George F; Lavarde V; Kazatchkine M D

CS Unite d'Immunopathologie, Hopital Broussais, Paris, France.

SO Int Conf AIDS, (1992). Vol. 8, No. 3, pp. 146 (Abstract No. PuB 7585).

CY Netherlands

DT (MEETING ABSTRACTS)

FS ICA8

LA English

EM 199212

AB OBJECTIVE: We report a case of invasive aspergillosis (ASP) presenting as renal abscess in a patient with AIDS in the absence of specific risk factors for ASP. ASP appears to be uncommon in patients with AIDS. Risk factors including neutropenia, prolonged steroid therapy or Marijuana inhalation are present in 80% of the reported cases of disseminated Aspergillosis. CASE: A 30 year-old male was first admitted in March 1991 for a severe Pneumocystis carinii pneumonia as the first manifestation of HIV infection. The patient was homosexual with no story of drug addiction. He was treated with anti-pneumocystis drugs and a short course of steroids. He then received Dapsone and zidovudine. CD4 cell count was  $7 \times 10(9)/1$ . The patient was readmitted in December 1991 with fever (39 degrees C) and macroscopic hematuria without lumbar pain. The abdominal CT scan revealed a large abscess involving the entire right kidney. The white blood cell count was  $10(9)/1$  with 72% neutrophils. A nephrectomy was immediately performed. Direct examination of the pus showed Aspergillus fumigatus as the sole pathogen. The same fungus was isolated in the sputum and urine. There were no signs of pulmonary involvement by conventional X-ray and CT scan. The search for Aspergillus antigen in blood and urine was negative; no antibodies were detected. Neutrophil functions assessed in vitro were normal. The patient was initially treated with Itraconazole (400 mg daily). Serum levels of Itraconazole were found to be under therapeutic ranges and the daily regimen was increased to 1000 mg. Since the patient was also receiving Dapsone, a possible interaction between these two drugs can not be ruled out. The evolution was marked by the persistence of aspergillus infection in the right flank. CONCLUSION: Aspergillus infections may occur more frequently in AIDS patients as a consequence of prolonged survival. Isolated kidney localizations have not been so far reported in the literature.

CT Check Tags: Case Report; Human; Male

Abscess: CO, complications

\*Abscess: DI, diagnosis

Abscess: DT, drug therapy

Adult

Antifungal Agents: TU, therapeutic use  
Aspergillosis: CO, complications  
\*Aspergillosis: DI, diagnosis  
Aspergillosis: DT, drug therapy  
\*Aspergillus fumigatus  
Aspergillus fumigatus: DE, drug effects  
Combined Modality Therapy  
HIV Seropositivity: CO, complications  
\*HIV Seropositivity: DI, diagnosis  
HIV Seropositivity: DT, drug therapy  
Ketoconazole: AA, analogs & derivatives  
Ketoconazole: TU, therapeutic use  
Kidney Diseases: CO, complications  
\*Kidney Diseases: DI, diagnosis  
Kidney Diseases: DT, drug therapy  
Nephrectomy  
Opportunistic Infections: CO, complications  
\*Opportunistic Infections: DI, diagnosis  
Opportunistic Infections: DT, drug therapy

RN 65277-42-1 (Ketoconazole); 84625-61-6 (Itraconazole)  
CN 0 (Antifungal Agents)

L165 ANSWER 17 OF 20 AIDSLINE  
AN 1991:12281 AIDSLINE  
DN ICA7-3207691  
TI Immunomodulating effects of nutrient therapy used in **combination** with **AZT**.  
AU Priestley J  
CS Search Alliance Community Research Initiative, Los Angeles, CA, USA.  
SO Int Conf AIDS, (1991): Vol. 7, No. 2, pp. 201 (Abstract No. W.B.2076).  
CY Italy  
DT (MEETING ABSTRACTS)  
FS ICA7  
LA English  
EM 199112  
AB OBJECTIVE: Often, people with HIV disease become deficient in several important nutrients, even rather early in the course of their disease. We studied the immunomodulating effects of nutrients used in **combination** with **AZT** and other anti-viral drugs. METHOD: We followed 92 patients (88 homosexual men and 4 heterosexual women) in all stages of HIV disease, over a period of 9 to 24 months. Patient's ages were between 23 to 52, at entry, and initial T4 cell counts ranged from 2 to 653. All patients took therapeutic doses of supplements containing vitamin C, A, E, all the B vitamins, zinc, selenium and trace elements. All patients with fewer than 200 T4 cells took Bactrim DS, 3 times per week to prevent Pneumocystis pneumonia. Sixty-three patients entered the study taking standard dosages of **AZT**, 500 mg per day. During the course of the study, 10 patients discontinued their **AZT** due to intolerance. Complete laboratory assessment, including T4/T8 count, T4 cell percent, CBC, SMAC 24, P24 antigen and P24 antibody, was obtained from each patient every 3 to 6 months. RESULTS: Twenty-two subjects dropped out of the study or were disqualified because they did not adhere to the study. Overall, the remaining 70 patients had a 92% two-year survival rate. Over the 2 years of this study, a total of 6 subjects died. Four died from progressive Kaposi's Sarcoma which they had upon entry into the study. In addition, 6 subjects developed an AIDS-defining illness and 2 of these people subsequently died. The other 64 subjects did not show disease progression; their symptoms and laboratory data, especially T4 cell count, remained stable throughout the

study. On average, T4 cell counts either stabilized or increased, while P24 antigen levels decreased and P24 antibody production remained strong. Survival has been independent of initial T4 cell counts. CONCLUSIONS: Nutrients appear to have a positive impact on overall function and survival of HIV-infected people. Nutrient therapy also appears to enhance the effectiveness of AZT, and may act to reduce its side-effects. Nutrient supplements are indicated as adjunctive HIV therapy, and further study is warranted.

CT Check Tags: Female; Human; Male  
 Adjuvants, Immunologic  
 Adult  
**Combined Modality Therapy**  
 Gene Products, gag: AN, analysis  
 HIV Antigens: AN, analysis  
 HIV Infections: CO, complications  
 HIV Infections: DH, diet therapy  
 \*HIV Infections: DT, drug therapy  
 Lymphocyte Subsets  
 Middle Age  
 Pneumonia, Pneumocystis carinii: PC, prevention & control  
 Sarcoma, Kaposi: ET, etiology  
 Viral Core Proteins: AN, analysis  
**Zidovudine: AE, adverse effects**  
 \***Zidovudine: TU, therapeutic use**  
 RN 30516-87-1 (**Zidovudine**)  
 CN 0 (Adjuvants, Immunologic); 0 (Gene Products, gag); 0 (HIV Antigens); 0 (HIV Core Protein p24); 0 (Viral Core Proteins)

L165 ANSWER 18 OF 20 AIDSLINE  
 AN 1991:11277 AIDSLINE  
 DN ICA7-3215991  
 TI Relationship between treatment scheme and short hospital stay in AIDS patients without the use of **AZT**.  
 AU Revuelta-Herrera A; Tapia-Conyer R; Cuauhtli M; Sepulveda-Amor J  
 CS Conasida-Mexico D.F., Mexico.  
 SO Int Conf AIDS, (1991). Vol. 7, No. 2, pp. 221 (Abstract No. W.B.2159).  
 CY Italy  
 DT (MEETING ABSTRACTS)  
 FS ICA7  
 LA English  
 EM 199112  
 AB OBJECTIVE: To determine the best diagnostic and therapeutic plan for AIDS patients from those available in health institutions, without use of **AZT**. METHOD: During 1988 we reviewed 467 clinical records of all HIV+ patients treated between 1985 and 1988 in two hospitals: one hospital is part of the Social Security System and the other is a public hospital. We reviewed only the first admission. The information was obtained in a previously structured questionnaire which included record identifications, laboratory and office procedures, diagnosis other than AIDS, and prescribed drugs. We analyzed the statistical association between other diagnoses, diagnostic and therapeutic management reported by physicians, and short stays at hospital with improvement discharge. RESULTS: Ninety two percent of all patients were males and 8% females; 77% were at Ia and IC categories according to the CDC's classification. Patient hospital stay was on the average, 19 days, and a mean of 26 laboratory tests were performed. The most frequent diagnosis in these patients was Tuberculosis (14%), Candida albicans (10%), and Pneumonia (14%), of the last diagnosis 45%, were Pneumocystis carinii. Fifty three percent of all patients received 10 drugs during their hospital stay, and 78% received up to 1-15

drugs in that period. We found a positive association between short stays and AIDS-tuberculosis patients treated with Isoniazid, Rifampicin and KCI; AIDS-Candida albicans patients treated with ketoconazole; and finally, AIDS-Pneumocystis carinii pneumonia patients treated with Trimethoprim-sulfamethoxazole ( $P < 0.05$ ). DISCUSSION AND CONCLUSIONS: In Mexico, not all AIDS patients can pay for AZT treatment, therefore we must search for better utilization of available resources in order to lessen the economic impact of AIDS and give patient better results.

CT Check Tags: Female; Human; Male  
 Acquired Immunodeficiency Syndrome: CO, complications  
 Acquired Immunodeficiency Syndrome: EC, economics  
 \*Acquired Immunodeficiency Syndrome: TH, therapy  
 Candidiasis: CO, complications  
 Candidiasis: DT, drug therapy  
 Hospitals  
 Isoniazid: TU, therapeutic use  
 Ketoconazole: TU, therapeutic use  
 \*Length of Stay  
 Pneumonia, Pneumocystis carinii: CO, complications  
 Pneumonia, Pneumocystis carinii: DT, drug therapy  
 Trimethoprim-Sulfamethoxazole Combination: TU, therapeutic use  
 Tuberculosis: CO, complications  
 Tuberculosis: DT, drug therapy  
 \*Zidovudine: TU, therapeutic use  
 RN 30516-87-1 (Zidovudine); 54-85-3 (Isoniazid); 65277-42-1  
 (Ketoconazole); 8064-90-2 (Trimethoprim-Sulfamethoxazole  
 Combination)

L165 ANSWER 19 OF 20 AIDSLINE  
 AN 1991:8863 AIDSLINE  
 DN MED-91319495  
 TI Low-dose zidovudine in children with an human immunodeficiency virus type 1 infection acquired in the perinatal period [see comments].  
 CM Comment in: Pediatrics 1991 Aug;88(2):389-92  
 AU Blanche S; Duliege A M; Navarette M S; Tardieu M; Debre M; Rouzioux C; Seldrup J; Kouzan S; Griselli C  
 CS Pediatric Immunology Division, Necker Hospital, Institut National de la Sante et de la Recherche Medicale U132, Paris, France.  
 SO PEDIATRICS, (1991). Vol. 88, No. 2, pp. 364-70.  
 Journal code: OXV. ISSN: 0031-4005.  
 CY United States  
 DT (CLINICAL TRIAL)  
 Journal; Article; (JOURNAL ARTICLE)  
 FS MED; Abridged Index Medicus Journals; Priority Journals  
 LA English  
 OS MEDLINE 91319495  
 EM 199111  
 AB This report describes the one-year results of a noncomparative study designed to assess the safety and tolerance of low-dose zidovudine (azidothymidine) given orally to 60 human immunodeficiency virus type 1-infected infants and children. At baseline, the mean age was 1.9 years ( $\pm 1.4$ ), and all were symptomatic: 43% were P2A and 57% were P2B to F according to the Centers for Disease Control classification. All the patients received zidovudine for at least 6 months, and 52 of them (87%) completed a full year of therapy. The mean duration of follow-up was 346 days ( $\pm 42$ ) (range, 183 to 366 days). The initial therapy consisted of four daily doses of 100 mg/m<sup>2</sup> (400 mg/m<sup>2</sup> per day, equivalent to 20 mg/kg per day). However, this treatment was modified when

neutropenia or anemia was observed. Twenty-nine children (48%) remained at the initial therapy for the entire study. **zidovudine** dosage was adjusted 92 times in the other 31 children (52%), mostly due to neutropenia (83%). Altogether, the time under full-dose therapy represented 81% of the total duration of the protocol for all patients. Children with mild symptoms, P2A at study entry, were more likely to remain under full-dose therapy than children with severe symptoms, P2B to F: the time under full-dose therapy represented 91% of the duration of the protocol for the former group and only 74% for the latter one (P less than .02). No clinical adverse experiences were attributed directly to **zidovudine**. Thirty-seven children were prescribed trimethoprim-sulfamethoxazole as a prophylaxis for *Pneumocystis carinii* pneumonia. (ABSTRACT TRUNCATED AT 250 WORDS)

CT Check Tags: Female; Human; Male

\*Acquired Immunodeficiency Syndrome: DT, drug therapy

Child, Preschool

Drug Administration Schedule

Drug Tolerance

Immunization, Passive

Infant

**Ketoconazole**: TU, therapeutic use

Opportunistic Infections: PC, prevention & control

Trimethoprim-Sulfamethoxazole **Combination**: TU, therapeutic use

**Zidovudine**: AD, administration & dosage

**Zidovudine**: AE, adverse effects

\***Zidovudine**: TU, therapeutic use

RN 30516-87-1 (**Zidovudine**); 65277-42-1 (**Ketoconazole**);

8064-90-2 (Trimethoprim-Sulfamethoxazole **Combination**)

L165 ANSWER 20 OF 20 AIDSLINE

AN 1990:11236 AIDSLINE

DN ICA5-00286089

TI Effect of **dehydroepiandrosterone (DHEA)** in lymphocytes and macrophages infected with HIV-1.

AU Schinazi R F; Eriksson B F; Aronld B; Lekas P; McGrath M S

CS Veterans Administration Med. Ctr, and Emory University Sch. of Med., Atlanta, Ga., USA.

SO Int Conf AIDS, (1989). Vol. 5, pp. 551 (Abstract No. M.C.P.55).

ISBN: 0-662-56670-X.

CY Canada

DT (MEETING ABSTRACTS)

FS ICA5

LA English

EM 199009

AB OBJECTIVE: Since the spectrum of activity of **DHEA** and structural analogues against human retroviruses has not been reported, several in vitro studies were performed to determine the degree of antiviral selectivity and mechanism of action of these drugs. METHODS: The inhibition of HIV-1 multiplication in the various cells was determined by reverse transcriptase assay of disrupted virions obtained from culture medium or by a p24 assay. The methodologies have been described in detail (see Antimicrob. Agents Chemother. 33:115, 1989; 32:1784, 1988; 30:491, 1986). RESULTS: The ability of **DHEA** and 3'-azido-3'-deoxythymidine (**AZT**) to inhibit the replication of HIV-1 was examined in human peripheral blood mononuclear cells (PBMC). Reverse transcriptase (RT) activity associated with virus and the amount of HIV-1 p24 antigens in the supernatant were used to assess the antiviral activity. Using the former assay, the median effective concentrations for **DHEA** and **AZT** were 17  $\mu$ M and 0.0014  $\mu$ M, respectively.

Results obtained by an enzyme immunoassay were similar. **DHEA**-sulfate was markedly less active than **DHEA**. In contrast, 16alpha-bromoepiandrosterone was more potent and also more toxic than **DHEA**. The specific antiviral activity of **DHEA** was confirmed in CEM cells. Although this steroid was still effective when added up to 3 days after infection, late treatment was not as effective as early treatment. **DHEA** did not have a direct virucidal effect on infectious virus. In contrast to the 5'-triphosphate of **AZT** and other known antiretroviral agents, **DHEA** did not inhibit HIV-1 RT enzymatic activity when tested up to 100  $\mu$ M. Acute infection of normal human macrophages was also inhibited by **DHEA** at 10-100  $\mu$ M. Multiple-drug effect analyses were used to quantitatively determine the interaction of **AZT** and **DHEA** in human PBMC infected with HIV-1 at a ratio of 1:1,000 and 1:4,000. Analyses of the cell culture data indicated mostly an antagonistic interaction. At therapeutic levels, no apparent toxicity to uninfected cells was observed. CONCLUSION: Our studies indicated that **DHEA** was a modest selective inhibitor of HIV-1 replication in human lymphocytes and macrophages. The mechanism(s) involved in the antiviral activity of **DHEA** and its sulfated form must be on sites other than the HIV-1 RT. In vitro results revealed that the combination of **AZT** and **DHEA** may decrease the efficacy of **AZT** or exacerbate virus replication.

CT Check Tags: Human  
 \*Antiviral Agents: PD, pharmacology  
 Cells, Cultured  
 Gene Products, gag: AN, analysis  
 \*HIV-1: DE, drug effects  
 HIV-1: IP, isolation & purification  
 HIV-1: PH, physiology  
 \*Lymphocytes: MI, microbiology  
 \*Macrophages: MI, microbiology  
 \*Prasterone: PD, pharmacology  
 RNA-Directed DNA Polymerase: ME, metabolism  
 Viral Core Proteins: AN, analysis  
 Virus Replication: DE, drug effects  
 RN 53-43-0 (**Prasterone**)  
 CN EC 2.7.7.49 (RNA-Directed DNA Polymerase); 0 (Antiviral Agents); 0 (Gene Products, gag); 0 (HIV Core Protein p24); 0 (Viral Core Proteins)

=> d his 1171-

(FILE 'WPIDS' ENTERED AT 14:13:11 ON 25 JUL 1999)

		E PROCAINE/DCN
		E E3+ALL/DCN
L171	359	S E2 OR 0186/DRN
		E PROCAINE/DCN
		E E4_ALL/DCN
		E PROCAINE/DCN
		E E4+ALL/DCN
L172	8	S E2 OR 3760/DRN
		E PROCAINE/DCN
		E E6+ALL/DCN
L173	170	S E2 OR 4423/DRN
L174	660	S L171-L173 OR PROCAINE
L175	9	S L174 AND (ZN OR ZINC)
L176	5	SEA L174 AND A430/M0,M1,M2,M3,M4,M5,M6
		E R0305+ALL/DCN
		E R030E5+ALL/DCN
		E R03035+ALL/DCN

PA (SPEC-N) SPECTRUM PHARM CORP

CYC 1

PI US 5064858 A 911112 (9148)\*

ADT US 5064858 A US 90-578030 900905

PRAI US 88-233247 880817; US 90-578030 900905

IC A61K009-14; A61K031-21

AB US 5064858 A UPAB: 19930928

The compsn. comprises **procaine** (1-10%), a complexing agent (e.g. 0.25-10% ascorbic acid) and opt. lidocaine, zinc citrate, an anticholinesterase, or an anticortisol agent (e.g. dilantin or clonidine), etc.. Other possible complexing agents are acetylsalicylic acid (for treating Alzheimer's disease), polysaccharides, glycols, pantothenic acid, amino acids and caffeine.

USE/ADVANTAGE - The compsn. is used to reduce the withdrawal symptoms of individuals addicted to narcotics or to treat the symptoms of age-related conditions such as tinnitus and Alzheimer's disease. It may be administered orally, parenterally or intravenously. An oral dosage unit contains 25-300 mg of **procaine**, and a parenteral dosage unit contains 25-100 mg of **procaine**.

In an example, 11 individuals having chronic and recurring addiction to cocaine are treated with a formulation comprising a protected complex of 4% **procaine** complexed with ascorbic acid. Dosage is 200-300 mg/day. After 3 weeks, 9 of the addicts avoid the use of cocaine or other narcotics for 3-7 months. Furthermore, attempts to use cocaine during the three-week period lead to aversion symptoms including vomiting, abdominal pain and muscle cramps. @ (5pp Dwg. No. 0/0)

FS CPI

FA AB; DCN

MC CPI: B03-F; B04-A06; B04-C02; B05-A03A; B07-D04A; B07-D09; B10-B01A; B10-B02; B10-C02; B10-C03; B10-C04D; B10-E04C; B12-C09; B12-G01B1; B12-G01B3; B12-G04; B12-J05; B12-L04

L187 ANSWER 3 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1990-368149 [49] WPIDS

CR 92-365522 [44]

DNC C90-160235

TI Insulin potentiation therapy of viral infections and cancer - comprises admin. of insulin followed by combination of glucose and antiviral or anti neoplastic drug.

DC B04 B05

IN AYRE, S G; PEREZ, G; PEREZ, G Y B; BELLON, D G; GARCIA, D P

PA (AYRE-I) AYRE S G; (BELL-I) GARCIA D P &amp; BELLON

CYC 2

PI US 4971951 A 901120 (9049)\*

A61K037-26

CA 1299102 C 920421 (9221)

ADT US 4971951 A US 88-77833 880727; CA 1299102 C CA 87-539603 870615

PRAI CA 87-539603 870615

IC ICM A61K037-26

AB US 4971951 A UPAB: 19931116

Viral diseases are treated by administration of, pref. 1 unit/kg body wt., insulin sufficient to induce hypoglycaemia followed by administration of glucose and an antiviral drug. Pref. the glucose is administered as 20-50 cc 50% hypertonic glucose solution. Specifically, the drug is cyclophosphamide, methotrexate, 5-fluoroacil, azidothymidine, ribavirin, suramin or HPA-23. The method is pref. carried out on a weekly basis. Pharmaceutical compsns. are claimed which comprises insulin (1 unit/kg), glucose (20-50 cc) 50% solution and an antineoplastic agent or anti-AIDS drug. Administration is pref. intravenously.

USE/ADVANTAGE - Treatment of viral diseases, especially AIDS and

cancer. Insulin acts to increase cell membrane permeability thus potentiating the effects of the drug. @ (6pp Dwg. No. 0/0) @  
0/0

FS CPI  
FA AB; DCN  
MC CPI: B04-B02D2; B04-B03A; B05-A02; B05-B01M; B06-D09; B10-A07;  
B12-A06; B12-G07

L187 ANSWER 4 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 1990-297515 [39] WPIDS  
DNC C91-152308  
TI Compsn. for treating addiction to narcotics - comprises protected complex of **procaine** and complexing agent such as ascorbic, pantothenic acetyl salicylic or aminoacid(s).  
DC B05  
IN **SAPSE, A T**  
PA (SAPS-I) SAPSE A T  
CYC 1  
PI US 4956391 A 900911 (9039)\*  
ADT US 4956391 A US 88-233247 880817  
PRAI US 88-233247 880817  
IC A61K027-00  
AB US 4956391 A UPAB: 19930928  
Compsn. comprises **procaine** (I) and a complexing agent capable of forming a protected complex with (I), in amt. effective to reduce the withdrawal symptoms. The complexing agent comprises ascorbic, pantothenic, acetylsalicylic or amine acids.  
Pref. the compsn. further comprises lidocaine, zinc citrate, anticholinesterases and/or anticortisol agents. The anticortisol agent is dilantin and/or clonidine. Pref. amt. of (I) is 1-10 wt.%.  
USE - The compsn. can also be used to treat tinnitus and Alzheimer's disease. @  
0/0@  
FS CPI  
FA AB; DCN  
MC CPI: B07-A01; B07-D09; B10-B01A; B10-B02; B10-C02; B10-C03; B10-C04D;  
B12-G01A; B12-G01B3; B12-G04A; B12-J05; B12-L04

=> d all tot 1188

L188 ANSWER 1 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 1999-253224 [21] WPIDS  
DNC C99-073950  
TI New topical composition for the treatment of Rhus dermatitis.  
DC B04 B05  
IN ALBERT, B M; RISO, R R  
PA (ALBR-N) ALBROS LP  
CYC 1  
PI US 5888515 A 990330 (9921)\* 4 pp A61K035-78  
ADT US 5888515 A US 97-989067 971211  
PRAI US 97-989067 971211  
IC ICM A61K035-78  
ICS A61K031-045; A61K031-70; A61K047-00  
AB US 5888515 A UPAB: 19990603  
NOVELTY - New topical composition for the treatment of Rhus dermatitis comprises a mixture of jewelweed extract, plantain leaf extract and an aqueous colloidal dispersion of oat grains.  
ACTIVITY - Dermatological; antiinflammatory; antipruritic; anaesthetic.

MECHANISM OF ACTION - None given.

USE - The composition is useful for the treatment and prevention of *Rhus dermatitis* (poison ivy).

ADVANTAGE - The components of the mixture have synergistic effects. The amphiphilic nature of the aqueous colloidal oat dispersion preserves the activity of the plantain jewelweed enzymes as a result of its oat oil fraction and also enhances topical delivery due to its aqueous fraction and the stabilising effect of the oat bran as a bulking agent. Skin layers are soothed, skin healing is promoted and pain and itching are minimised.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B04-A08C2; B04-A10B; B04-A10G; B14-C08; B14-G02A; B14-N17C; B14-S09

L188 ANSWER 2 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1998-479346 [41] WPIDS

DNC C98-144905

TI Medicinal preparation against ageing - contains **procaine** hydrochloride aqueous and oil solution vitamin(s), metallic elements, and super oxide-dismutase.

DC B05

IN BARSAN, M M; BOTEZ, M

PA (BARS-I) BARSAN M M; (BOTE-I) BOTEZ M

CYC 1

PI RO 112997 B1 980330 (9841)\* 1 pp A61K037-43

ADT RO 112997 B1 RO 97-28 970110

PRAI RO 97-28 970110

IC ICM A61K037-43

AB RO 112997 B UPAB: 19981014

A medicinal preparation against ageing contains (all parts by weight): 0.1-0.2 **procaine** hydrochloride; 50-200 superoxide-dismutase; 1.5-5 vitamin B2; 60-500 vitamin C; 10-100 vitamin B1; 20-200 vitamin B6, 10-30 vitamin PP; 400-1000 IU vitamin A; 10-30 IU vitamin E; 400-1200 IU vitamin D; 5-50 Zn; 2-5 Mn; 40-120 Ca; 200-400 Mg; 400-1200 P; 2-5 K; and 0.05-0.300 Se. The ingredients are formulated as tablets or solutions.

Dwg.0/0

FS CPI

FA AB

MC CPI: B03-L; B04-L03A; B05-A01A; B05-A01B; B05-A03A; B05-B02A3; B05-B02C; B10-B01A; B14-J01A4

L188 ANSWER 3 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1997-550494 [51] WPIDS

DNC C97-175628

TI Ointment for treating skin diseases, e.g. hand or foot tinea or chapped skin.

DC B05

IN WANG, Z

PA (WANG-I) WANG Z

CYC 1

PI CN 1129111 A 960821 (9751)\* A61K035-64

ADT CN 1129111 A CN 95-113050 951027

PRAI CN 95-113050 951027

IC ICM A61K035-64

ICS A61K009-06

AB CN 1129111 A UPAB: 19971222

Ointment (I) comprises **procaine**, queen-bee tonic, boric acid, triethanolamine, ortho- hydroxybenzoic acid, zinc oxide,

dexamethasone and vaseline.

USE - (I) is useful for the treatment of buttocks tinea, hand or foot tinea, chapped skin, eczema of scrotum and eczema around anus and other skin diseases.

ADVANTAGE - (I) has a permanent and fast-acting effect. (I) contains reduced amounts of active ingredient, and has high curative effect without toxicity or side effects. The curative effect of (I) is not affected by geological differences, climate, water quality or callus quality.

FS CPI

FA AB

MC CPI: B01-B02; B04-B01C3; B04-B04M; B05-A03A; B05-B02C; B10-B01A; B10-B03B; B10-C03; B12-M02B; B14-A04C; B14-N17

L188 ANSWER 4 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1994-157935 [19] WPIDS

DNC C94-072578

TI Wound sterilisation soln. with antiseptic activity - based on 'dioksidin', with additional zinc and cobalt sulphate(s), chymotrypsin and procaine.

DC B05

IN FEDORINA, A P

PA (POME-R) POLT MED STOMATOLOGY INST

CYC 1

PI SU 1799594 A1 930307 (9419)\* 3 pp A61K009-08

ADT SU 1799594 A1 SU 90-4872459 900801

PRAI SU 90-4872459 900801

IC ICM A61K009-08

AB SU 1799594 A UPAB: 19940627

More effective local treatment of wounds infected with suppurative microorganisms.

The antiseptic prepn., namely 'diotsinkokhim' (sic), contains the following ingredients (wt. %): 'dioksidin' (sic) (0.05-0.1); zinc sulphate (0.11-0.44); cobalt sulphate (0.12-0.48); chymotrypsin (0.0005-0.01); procaine (0.25-0.5); distilled water (balance).

USE/ADVANTAGE - For treating suppurative and inflammatory processes or preventing development of suppuration in patients with soft or bony tissue injuries. Effective against a wide range of microorganisms, including those resistant to antibiotics and other antiseptics.

Dwg.0/0

FS CPI

FA AB

MC CPI: B05-A03; B10-A22; B14-A01; B14-N17B

L188 ANSWER 5 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1994-157934 [19] WPIDS

DNC C94-072577

TI Castor oil-based lipstick compsn. having antiinflammatory and bacterial properties - contains additional light filter comprising extracts of coffee, propolis, daisy and hops..

DC B05 D21

IN BASKAKOVA, N M; OLİLETS, M V; SHUKHMAN, M I

PA (STAL-R) STALGENE AGRIC FIRM AEROSOL ASSOC

CYC 1

PI SU 1799593 A1 930307 (9419)\* 4 pp A61K007-027

ADT SU 1799593 A1 SU 90-4877675 900904

PRAI SU 90-4877675 900904

IC ICM A61K007-027

AB SU 1799593 A UPAB: 19940627

UV filtration is ensured through combined action of components.

The lipstick comprises the following components (wt%): perfumery oil (5.3-19.5); montan wax (5-9); beeswax (5-8); lanolin (5-10); petrolatum (2-6); paraffin (2-6); stearyl stearate (2-5); sorbitan oleate (1-5); silicone oil (2-5); isopropyl myristate (2-5); cacao butter (1-5); UV filter consisting of coffee fat and oil extract, mink oil propolis extract and carbonic acid extracts of daisy and hops in 1.5:1:1:1 ratio (3-5); mother-of-pearl paste (13.5-26.5); dye (0.5-7.0); perfume (1-1.7); castor oil (balance). Optimum light-filtration activity is manifested at 280-320 nm by virtue of the synergistic effects of the coffee, propolis, daisy and hops extracts.

USE/ADVANTAGE - Used in cosmetics industry for mfg decorative lip prods. The lipstick material exhibits antiinflammatory and bactericidal properties, and reduces allergenic reactions.

Dwg.0/0

FS CPI  
FA AB; DCN  
MC CPI: B04-A08C2; B04-A10; B04-B01C; B04-C03D; B10-G02; B14-A01; B14-C03; B14-S09; D08-B01

L188 ANSWER 6 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD  
AN 1993-303017 [38] WPIDS  
DNC C93-134897  
TI New zaragozic acid derivs. - useful in treatment of arteriosclerosis, fungal infections and cancer.  
DC B02 D16  
IN ARISON, B H; BYRNE, K M; CHEN, S T; KAPLAN, L; MACCONNELL, J G; OMSTEAD, M N; PETUCH, B R; WHITE, R F; MAC, CONNELL J G  
PA (MERI) MERCK & CO INC  
CYC 40  
PI WO 9317557 A1 930916 (9338)\* EN 76 pp A01N043-32  
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE  
W: AU BB BG BR CA CZ FI HU JP KR LK MG MN MW NO NZ PL RO RU SD SK UA  
US 5252471 A 931012 (9342) 7 pp C12P017-18  
AU 9337969 A 931005 (9405) A01N043-32  
US 5294627 A 940315 (9411) 9 pp A61K031-335  
US 5302604 A 940412 (9414) A61K031-38  
ADT WO 9317557 A1 WO 93-US2095 930308; US 5252471 A US 92-848573 920309; AU 9337969 A AU 93-37969 930308; US 5294627 A US 92-936708 920827; US 5302604 A CIP of US 92-848628 920309, US 92-957316 921006  
FDT AU 9337969 A Based on WO 9317557  
PRAI US 92-848573 920309; US 92-848628 920309; US 92-936708 920827;  
US 92-957316 921006  
REP EP 450812; S 5026554 US; 5053425 US 5; 055487 US 50; 96923 US 510;  
2907 US 5200  
IC ICM A01N043-32; A61K031-335; A61K031-38; C12P017-18  
ICS A01N043-54; A61K031-44; A61K031-505; C07D319-08; C07D493-08;  
C12N001-14  
AB WO 9317557 A UPAB: 19931123  
Zaragozic acid derivs. of formula (I) and (II), and their salts, are new. In (I) T is C(=CH<sub>2</sub>) (in I) or CH<sub>2</sub> (in II); T' is a gp. of formula (a) (in I) or a gp. of formula (b) (in II); R<sub>1</sub> is a gp. of formula (iii)-(vi); X is H, halo, OH or Mr; Y is halo, OH or Me; Z<sub>1</sub>-Z<sub>3</sub> are H or 1-5C alkyl (opt. substd. by phenyl (itself opt. monosubstd. by Me, MeO, halo or OH), or a gp. Q (which opt. form a 5-10 membered mono- or bicyclic ring with 1-5C alkyl) or a gp. of formula (vii) or (viii); and Q is 1-5C alkyl-carbonyloxy, 5-10C aryl-carbonyloxy, 1-5C alkyl-carbonyloxy or 6-10C aryl-carbonyloxy.

USE/ADVANTAGE - The new cpds. are squalene synthase inhibitora and

are useful as cancer treatment agents, cholesterol lowering agents and antifungal agents. They may be used e.g. to treat arteriosclerosis, hyperlipidaemia, familial hypercholesterolemia, etc. They may be administered in combination with HMG-CoA reductase inhibitors, HMG-CoA synthase inhibitors, squalene epoxidase inhibitors, protinol, niacin, gemfibrozil, clofibrate, LDL-receptor gene inducers, etc. Asmin. is oral or parenteral in doses of 20-2000 mg/day.

30

Dwg.0/0

FS CPI

FA AB; GI; DCN

MC CPI: B06-A02; B12-A02C; B12-G01B1; B12-G07; B12-H03; D05-C

L188 ANSWER 7 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1993-218204 [27] WPIDS

DNN N93-167211 DNC C93-097251

TI Treatment of duodenal ulcers in women - involves electrophoresis over appendage area using copper sulphate soln. during first phase of menstrual cycle, and zinc sulphate during second phase.

DC B05 B06 P34 S05

IN GANTSEV, SH KH; PRAZDNIKOV, E N; SAKHAUTDINOV, V G

PA (SAKH-I) SAKHAUTDINOV V G

CYC 1

PI SU 1745267 A1 920707 (9327)\* 4 pp A61N001-34

ADT SU 1745267 A1 SU 90-4780046 900111

PRAI SU 90-4780046 900111

IC ICM A61N001-34

AB SU 1745267 A UPAB: 19931116

Electrophoresis is carried out over the appendage area using copper sulphate soln. during the first phase of the menstrual cycle, and electrophoresis of 2% soln. of zinc sulphate altered in a day with endo-nasal electrophoresis of 2% soln. of Novocaine during second phase of the menstrual cycle. Treatment is started not later than 2-4 days before supposed ovulation, and is carried out for 18-20 days.

USE/ADVANTAGE - In gastroenterology. Higher therapeutical efficiency and longer remission time are obtd. by normalising the hormonal profile of female sex hormones. Bul.25/7.7.92

Dwg.0/0

FS CPI EPI GMPI

FA AB; DCN

MC CPI: B05-A03A; B10-B01A; B12-G04; B12-J01

EPI: S05-A04

L188 ANSWER 8 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 1992-249386 [30] WPIDS

DNC C92-111273

TI Sterile injectable mixt. for tumour thermotherapy - useful for intense and local radio frequency, contg. ferrite plastic coated insol particles.

DC A96 B07

IN LEVEEN, E G; LEVEEN, H H; LEVEEN, R F

PA (THER-N) THERMAL DEV INC

CYC 1

PI US 5128147 A 920707 (9230)\* 3 pp A61K009-16

ADT US 5128147 A Cont of US 89-294005 890106, US 90-563206 900806

PRAI US 89-294005 890106; US 90-563206 900806

IC ICM A61K009-16

ICS A61K009-50; A61K033-26; A61K033-32

AB US 5128147 A UPAB: 19931006

Mixt. comprises a combination of finely ground manganese zinc